

# Yamaha Digital Home Theater Components & NATURAL SOUND Audio Components



*d*-cinema



## Dedicated to the creation of fine sound for over

Yamaha's involvement with sound began with the production of our first reed organ in 1887. Shortly thereafter, we began making pianos and other instruments, and today we are the world's largest producer of musical instruments. We also operate a worldwide music school, design concert halls and produce innovative electronic instruments. Our audio components have long been recognized as the standard bearers of fine quality, and with the development of Digital Sound Field Processing in 1986, we opened a new era in home entertainment. All of our acoustic and audio expertise is now engineered into LSIs that we design and manufacture ourselves, and these powerful chips are expanding and enhancing entertainment possibilities in the exciting new field of home theater. Recently, we've also introduced state-of-the-art video components, and now offer everything necessary for the finest in music and movie enjoyment at home.

## C O N T E N T S



a century.

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# New High Resolution Lens and Advanced Video Technologies Deliver



The previous DPX-1000 has been honoured with an EISA Award for High-End AV Product 2003-2004. The prestigious EISA Awards are chosen by media representatives from up to 20 European countries.

## DPX-1100 Digital Cinema Projector

The DPX-1100 incorporates a new high resolution lens and a wide range of advanced video technologies to deliver extraordinary video performance. Contrast is an incredible 4,000:1, brightness is 800 ANSI lumens, picture sharpness is outstanding and color reproduction is stunningly natural. In short, if you want to watch movies with the full visual impact the directors aimed for, this is the projector to choose.

### The Yamaha Natural Black Concept

Even though you tend to notice the bright colors, how a projector reproduces gradations of black is extremely important. When you watch a movie, shadows should stand out from the background, black levels should be solid even in dark scenes, and blacks should maintain their depth when the scene becomes brighter. Yamaha developed the Natural Black concept, combining advanced technologies, parts and functions, to achieve truer, deeper levels of black than ever before.

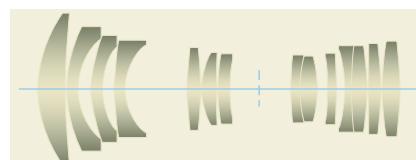


Yamaha Natural Black makes subtle degrees of black in textures, shadows and so on stand out more clearly.

With other projectors, black contrast may be soft and fuzzy rather than sharp and clear.

### High Resolution Lens

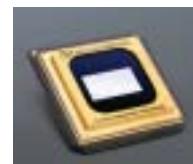
The DPX-1100 goes beyond the capabilities of other projectors with the use of a new high resolution lens that maintains extreme resolution sensitivity all the way to the edges.



Four anomalous dispersion glass components ensure negligible levels of chromatic aberration while maintaining a short focal point and high zoom magnification.

### High Performance HD2+ DMD™

Naturally, Yamaha equipped the DPX-1100 with the latest DMD device, HD2+, which has narrow mirror gaps and no center pivot mark, improving contrast over the previous version. In addition, video processing is 10-bit from A/D conversion through to DMD output.

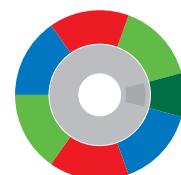


Latest DMD HD2+ Device

### Seven-Segment Color Wheel

Yamaha debuts the use of a seven-segment color wheel, with an ND filter-equipped green segment having been added to the previous wheel. The seven-segment structure

reduces dither, while color reproduction is excellent, with greens being more true to life than ever (achieving the HD monitor "green" standard). Green resolution is 10-bit, which also improves the representation of black tones. Better color balance contributes to a 30% improvement of actual brightness at D65 (the white reference color standard), compared to the previous Yamaha projector.



Seven-Segment Color Wheel Principle

### Faroudja TruLife Enhancer

The DPX-1100 incorporates TruLife Enhancer technology from Faroudja, one of the world's top developers of video technology. It ensures that picture clarity is excellent, with clean, sharp edges and details.

### Color Balance System

The DPX-1100 offers three Color Balance modes. The first is the Standard mode and cannot be adjusted. The second is the RGB mode, which allows adjustment of the red, green and blue colors by specifying x and y values for each (yellow, cyan and magenta are

# Extraordinary Picture Quality.

derived from the three main colors). The third mode is RGBYCM, which allows each of the six colors to be directly specified by entering x and y coordinates. There are six memory presets for storing personal adjustments.

## Color Temperature Adjustment

You can adjust the correlated color temperature in 500K increments between 5,000K and 10,000K, in order to achieve accurate color fidelity. A graph on the color temperature menu facilitates this operation. In order to maintain perfect color balance when the settings are changed, automatic color balance calculation and adjustment is provided.



## Mounting Flexibility

Mounting the DPX-1100 is easy and versatile. Lens-to-screen distance can be anywhere from 9 ft. 10 in. to 15 ft. 9 in. (100" screen) thanks to the powerful 1.6x zoom lens. Motorized vertical lens shift is  $\pm 50\%$  of projection height, so the projector can be used at any height between the top and bottom of the screen. Iris, zoom and focus adjustments are also motorized.

## Six Memory Settings

There are six memory positions for storing different combinations of parameter settings, and each can be used for two input signals, meaning you can call up any of 12 memory conditions. You can store the same parameter combination for DVD and HDTV, for example. The projector automatically adjusts when the source is changed, so you do not have to select a different memory position.

## Lamp Power Selector

The multi-step Lamp Power Selector makes it possible to adjust for optimum brightness and contrast with different levels of room lighting and video sources. It can also be used to extend lamp life (at 80% brightness, lamp life goes from 2,000 to 2,500 hours).

## Extensive Menus Plus Handy One-Line Menu

The DPX-1100 has an extensive range of menus, viewable on-screen and managed via the remote control. There are four main

menu groups (Image, Signal, Initial and Setup), each offering a wide range of adjustable parameters, some of which have submenus. In addition, a one-line menu can be superimposed on the screen while viewing a movie or other source, for "fine-tuning" the image as you watch.



## Custom Installation Solutions

The DPX-1100 facilitates custom installation with an RS-232C interface, IR control in/out ports for using an optional wired connection to the IR remote control, front and rear IR sensors and a powerful DC12V, max. 200mA trigger out with selectable trigger timing.

## Silent Operation

The DPX-1100 runs with the quiet efficiency you expect from a high quality home theater projector. It uses effective DMD and power supply ducting, while minimizing cooling fan operation by continually adjusting it in accordance with picture brightness.

## HDMI Terminal

Most high-end projectors provide DVI connection, but the DPX-1100 goes further with an HDMI connection. HDMI can handle digital signals like DVI, and a variety of other information as well, such as component type, scan status and colorimetry, which can be adjusted.

## Full-Function Remote Control

The remote control unit gives you total control over all of the projector's functions and settings. It is designed for easy gripping and use, and can be pointed at either the front or the back of the projector, from as far as 7m (23 feet) away.



## Other Notable Features

- Smart Zoom for projecting 4:3 broadcasts onto a full 16:9 screen with no distortion in the middle
- Cinema Zoom with Zoom Up and Zoom Out for eliminating bars on the top and bottom of the 16:9 screen
- Selectable video scan (100% or 94%)



In addition to the Input A and Input B (Component Video and RGB signal) terminals, the DPX-1100 rear panel offers an HDMI input terminal, composite video input terminals, D4 video input terminal, remote in/out terminal, and RS-232C and Trigger out (12V/200mA) terminals.



DPX-1100 Control Panel

- Automatic aspect conversion
- Manual display aspect selection (8 modes)
- Still (freeze frame) function
- Operation status lock
- Test pattern selection
- Message display keeps you informed of operating status
- Four warning indicators (lamp, cover, temperature, fan)



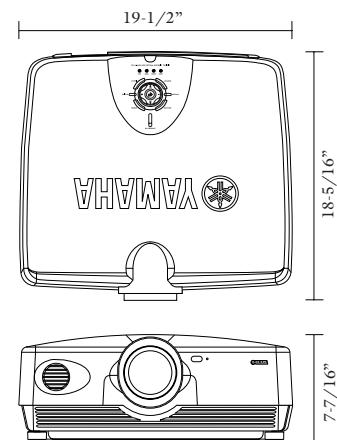
On-Screen Display

## Accessories

- PJL-427: Optional lamp cartridge
- PMT-L31: Optional installation brackets for low ceiling
- PMT-H35: Optional installation brackets for high ceiling

## DPX-1100 Main Specifications

- Projection System: Digital Light Processing (DLP)<sup>TM</sup>
- Technology • Device Type—Size: 0.8 inch DMD<sup>TM</sup> HD2+; Pixel: 1,280 x 720 • Projection Lens: F=2.7-5.0, f=24.3-38.9mm • Functions: Zoom (Motorized): x 1.6; Focus (Motorized); Lens Shift (Motorized): Vertical Up/Down 50%; Iris (Motorized): 3-Step • Projection Ratio: 1.355-2.168 (3.0 - 4.8m, 100" 16:9) • Screen Size: 60-200 inch (16:9) • Lamp: 270W SHP, 2,000 hours • Brightness: 800 ANSI lumens (White Boost: on, Iris: off); 400 ANSI lumens (White Boost: on, Iris: Fully on) • Contrast Ratio 4,000:1 (White Boost: on, Iris: Fully on); 2,000:1 (White Boost: on, Iris: off) • Color Format: NTSC, PAL, SECAM, NTSC4.43, PAL-M, PAL-N, PAL60 • PC Signal: VGA, SVGA, XGA, MAC13", MAC16, MAC19, iMAC\_VGA, iMAC\_SVGA • Scan Frequency—Horizontal: 15-8 kHz; Vertical: 50-85 Hz (Analog), 60 Hz/50 Hz (Digital) • Power Consumption: 375 W (Standby: 0.1 W) • Dimensions (W x H x D): 19-1/2" x 7-7/16" x 18-5/16" • Weight: 30.4 lbs.



# High Quality Home Theater LCD Projector Provides Excellent Performance with Flexible Installation Capability.



NATURAL BLACK

## LPX-510 Home Cinema Projector

DCDi  
by FAROUDJIA

HDMI™

Utilizing high resolution LCD technology, the LPX-510 provides excellent image quality with lifelike color, and a number of features that you'll find extremely useful. It is equipped with three high-performance 0.7" 720p liquid crystal panels and 10-bit gradation control that permits representation of 1.07 billion colors. Brightness is a high 1,000 ANSI lumens, allowing viewing in relatively bright rooms.

### Yamaha Natural Black Concept

As with the DPX-1100, Yamaha put a great deal of effort into improving black reproduction. Our Natural Black design concept enables the LPX-510 to achieve much deeper levels of black than conventional projectors.

### High Performance LCD Panels, 10-Bit Processing, High Brightness

The LPX-510 uses three TFT Active Matrix LCD panels capable of projecting high resolution 720p (1,280 x 720-pixel) HDTV images. It also employs 10-bit video processing, giving it the ability to reproduce 1.07 billion colors, while 16:9 aspect ratio compatibility means that widescreen movies can be viewed in their entirety, with the correct perspective. 1,000 ANSI lumens brightness allows the projector to be used even in relatively bright rooms.



### 3D Linear Color Balance

3D Linear Color Balance maintains the proper balance between the R/G/B signals, adjusting color irregularities through a range of 15,360 correction points (640 points x 8 steps x 3



No 3D Linear Color Balance 3D Linear Color Balance

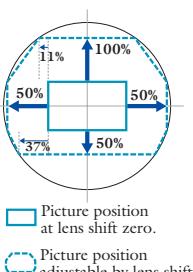
colors) for accurate color in any type of scene from dark to bright.

### Cinema Balance Filter

The LPX-510 introduces a new Cinema Balance Filter that enhances color reproduction when viewing in a dark room.

### Lens Shift, Motorized Iris and Zoom Control

Vertical and horizontal lens shift capability means that the projector does not have to be carefully positioned directly in front of the screen. You can use the motorized iris control to improve contrast and focusing, and to give the image a more three-dimensional feel. The motorized zoom control will expand the image up to 1.5 times to give you a closer view of the scene and for projecting a 16:9 picture on a 4:3 screen.



Picture position at lens shift zero.  
Picture position adjustable by lens shift.

memories

- Operation status lock (zoom, focus and lens shift)
- Automatic aspect conversion
- HDMI terminal for digital inputs



### Accessories

- PJL-520: Optional lamp cartridge
- PMT-L51: Optional installation brackets for low ceiling
- PMT-H55: Optional installation brackets for high ceiling

### LPX-510 Main Specifications

- Device: 0.7 inch HTPS TFT x 3 • Pixel: 1280 x 720
- Projection Lens: F=2.06-2.79, f=21.4-31.7 mm; zoom (motorized): x 1.5 • Motorized Iris: 100%-75%
- Projection Ratio: 1.355-2.038 • Screen Size: 30-300 inch (16:9) • Lamp: 200-150W UHP; 1,700 hours (200W continuous), 3,000 hours (150W continuous) • Brightness: 1,000 ANSI lumens (iris: off, Cinema Balance Filter: off); 350 ANSI lumens (iris: fully on, Cinema Balance Filter: on)
- Contrast Ratio: 1,200:1 (iris: 75%, Cinema Balance Filter: on); 1,000:1 (iris: 100%, Cinema Balance Filter: on) • Color Format: NTSC, PAL, SECAM, NTSC4.43, PAL-M, PAL-N and PAL60 • Compatible Signal: 480i, 480p, 576i, 576p, 720p and 1080i • PC Signal: SVGA, XGA, MAC13", MAC16", MAC19", iMAC\_VGA, iMAC\_SVGA • Fan Noise: 27 dB (lamp power min.); 34 dB (lamp power max.) • Power Consumption: 290 W • Standby Power Consumption: 0.4 W (RS-232C off); 3 W (RS-232C on) • Dimensions (W x H x D): 17.5/16" x 5.3/8" x 12.5/8" • Weight: 13.9 lbs.



In addition to the Input A (5 composite) and Input B (5 composite) terminals, the LPX-510 rear panel offers an HDMI input terminal, S-Video and composite video input terminals, D4 video input terminal, and RS-232C and Trigger out (12V/200mA) terminals.

# This 42" Plasma Display Monitor Delivers Incredibly Smooth, High-Definition Image Quality for an Exceptional Home Theater Viewing Experience.



**NATURAL BLACK**



SRS TruBass

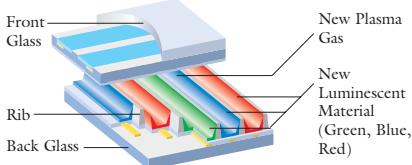
## PDM-4210 Plasma Display Monitor

Movies have never looked better in the home than they do on this extraordinary plasma display monitor. HDTV and even other TV broadcasts will also look superb. For the finest in home theater viewing, as well as superior control, convenience and versatility, the PDM-4210 is the clear choice.

### ALIS Method Panel

This plasma display panel uses an advanced ALIS (Alternate Lighting of Surface) Method to deliver a sharp, clear picture with the smooth, high-definition quality you see in a movie theater. The PDM-4210 uses the latest ALIS Method technology, which features new plasma gas and luminescent material. The result is a brighter picture ( $1,100 \text{ cd/m}^2$ ) and higher color temperature, which makes white areas stand out more vividly. The panel can also display a wider range of colors (16.7 million), with enhanced color purity.

#### The ALIS Method Panel



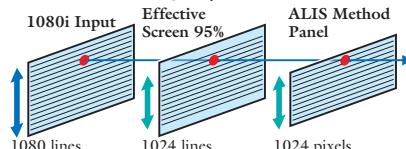
### Natural Black Drive System

Yamaha's Natural Black Drive System automatically determines the brightness of the screen and applies the gray scale (contrast) best suited to the scene in order to reproduce both bright and dark areas with small details clearly visible. Contrast ratio is an outstanding 1,000:1.

### HDTV Capability

The PDM-4210 is fully HDTV capable, meaning that 1080i high definition images can be displayed line for line without vertical scaling. Other signals, such as 720p HDTV signals and conventional broadcasts, are converted up to 1080 progressive lines by a 1080p processor, for much higher image quality than with conventional displays.

#### True HDTV Picture Quality



1080i is the HD broadcasting standard. However, it uses overscanning, so the actual screen is 95%, or 1024 lines. Therefore, the ALIS Method panel, with 1024 pixels, reproduces the true image, without noise at the edges.

### Digital Linear Color Control

Digital Linear Color Control continually maintains the ideal balance between the three main colors (red, green, blue) for optimum color reproduction in every scene from very dark to very bright.

### Long Life of 60,000 Hours

Another benefit of the new ALIS Method panel is lower power consumption and longer panel life. The PDM-4210 will provide high quality

images for 60,000 hours,\* about twice as long as a typical CRT monitor.

\* Until panel brightness reduced to 40%. Yamaha measurement.

### Other Notable Features

- Digital Image Processing
- 3:2 Pulldown
- Extensive Menu of Picture Controls
- Installation Flexibility

**Accessory** • PWK-150: wall-hanging brackets

#### PDM-4210 Main Specifications

- Effective Display Area (H x V): 922 x 522 mm, 1,060 mm diagonal • Aspect Ratio: 16 : 9 • Number of Pixels (H x V): 1,024 x 1,024 pixels (ALIS Method panel) • Pixel Pitch (H x V): 0.90 x 0.51 mm • Number of Colors (gray levels): 16.7 million colors ( 256 gray levels ) • Transmission of Front Filter: Dark tint face 32% • Brightness (White Peak, Panel Brightness):  $1,100 \text{ cd/m}^2$  • Contrast Ratio (Panel): 1,000:1 • Video Signal: PA, SECAM, PAL6, NTSC4.43, NTSC3.58, PAL-M and PAL-N • Component Signal: 480i/480p, 576i/576p, 720p (60), 1080i (50/60) and 1035i (60) • Audio Power (RMS): 12W + 12W • Power Consumption: 365 W • Standby Power Consumption: Less than IW/AC100-AC120V • Dimensions (W x H x D): 40.9/16" x 25.1/16" x 3.9/16" • Weight: 77.6 lbs.



The PDM-4210 rear panel offers digital input (RGB 1), analog input (RGB 2), analog audio input (RGB 1 and RGB 2: 3.4mm stereo mini jack), and RS-232C interface.

# Every Yamaha receiver gives you maximum home theater performance!

Yamaha receivers are designed and built to deliver nothing less than maximum performance: the highest sound quality, the highest picture quality, and the best surround realism, all with the easiest possible operation. Whichever model you choose, we're confident that it will totally satisfy your highest expectations for home theater enjoyment.

Highest Sound Quality

Highest Picture Quality

Easiest to Use

Best Surround Realism

## Highest Sound Quality

Yamaha has a genuine commitment to providing absolutely the finest sound quality possible in every component we create. With over a century of experience in sound production (we made our first reed organ in 1887) and our status as a world leader in acoustic and electronic musical instruments, we are passionate about creating and reproducing sound in the most beautiful and natural way. Over the years, with each new series of receivers, we have improved and refined audio performance, and Yamaha Digital Home Theater Receivers maintain this tradition with an impressive array of technology and features.

**Digital ToP-ART Concept**  
Digital ToP-ART (Total Purity Audio Reproduction Technology) is a Yamaha product development philosophy that combines advanced digital engineering and circuit design to maximize audio signal purity. It is used in three sections of the receiver, the High Performance Digital

Circuitry and High Current Amplification (explained below) and the High Definition CINEMA DSP circuitry (explained on page 12), each of which employs the world's highest grade parts and most sophisticated LSIs. Digital ToP-ART enables Yamaha receivers to deliver superb sound quality and bring out the full potential of Yamaha's amazing CINEMA DSP technology.

### High Performance Digital Circuitry (RX-Z9)

This section exemplifies the Digital ToP-ART concept of maximizing the quality of the digital circuitry while minimizing analog circuitry, and also maintains a straight and logical circuit layout for optimum signal purity. It includes a variety of sophisticated technology, beginning with Burr-Brown 192kHz/24-bit digital-to-analog converters for all channels with DSD (Direct Stream Digital) compatibility. Accurate-Touch Volume Control LSIs (Yamaha YAC520) are also used for all channels. The digital bass and treble tone controls have turnover frequencies for the front L/R and center channels. Eight-channel analog input signals are processed by 96kHz A/D conversion for highest quality. All circuitry is on a four-layer processing

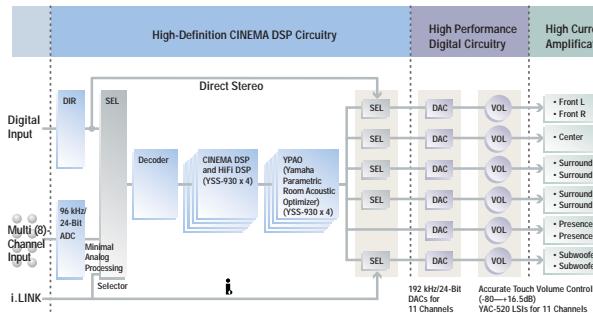
board in a fully shielded cabinet for reduced digital interference.

### High Current Amplification

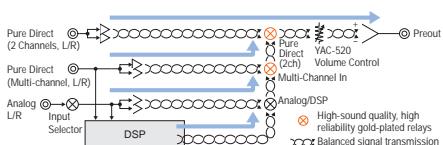
Although power rating is often the first thing people look at in a receiver, high power output does not necessarily mean good sound. High current level is a much more important factor, so Yamaha developed the High Current Amplification system, which overcomes two problems common to ordinary receivers. The first is a difference in voltage between the power supply and amplifier circuits caused by current fluctuations. This was solved by using custom-made, high-grade block electrolytic capacitors and a copper grip for one-point grounding. Another current drop is generally seen between the amplifier circuit and the speaker terminals, caused by the cables, speaker output relays, copper circuit boards, and so on. To avoid this problem, we used an extra-large, low-impedance toroidal transformer and gold-plated speaker relay contacts. As a result, Yamaha receivers achieve low impedance, high current power from input (power supply circuit) to output (speaker terminals). This drives the speakers much more smoothly and dynamically, for better sound from all sources, including 2-channel audio.

### Choice of Signal Paths for Optimum Quality

Yamaha receivers give you a choice of specialized signal paths, ensuring that you can obtain the purest signal quality possible. Pure Direct provides the shortest possible



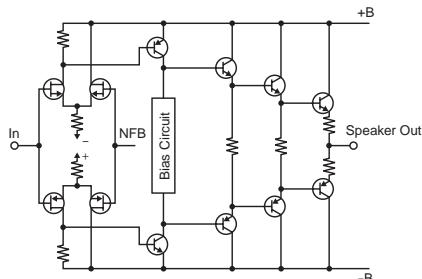
signal path for two-channel or multi-channel analog inputs, with no signal processing and no display. Straight outputs the original analog or digital signal without any post-processing. iLINK provides a digital connection for DVD-Audio Linear PCM, Super Audio CD DSD (Direct Stream Digital) and other high quality audio sources. Direct provides a direct connection for analog stereo/multi-channel input and digital stereo/multi-channel (via iLINK) input, with a dimmed display.



**RX-Z9 Front Channel Signal Flow**

#### Symmetrical Power Amplifier Circuitry (RX-Z9)

The High Current Amplification system uses a symmetrical, full push-pull circuit configuration with a complementary



**Basic Circuit Diagram**

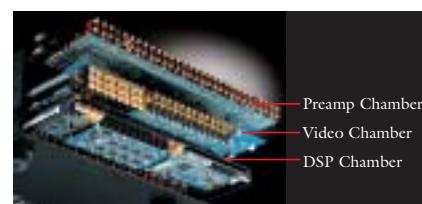
FET input stage. This ensures balanced output with no signal interference and highest slew rate (rate at which signal changes; affects high frequency response). Furthermore, the massive toroidal transformer and large capacity block electrolytic capacitors (28,000 $\mu$ F) ensure a consistently stable power supply.

#### Effective Linear Damping

Level variations due to high impedance tend to reduce an amplifier's damping factor (ability to control unwanted speaker cone movement at low frequencies), and frequency variations cause it to fluctuate. Yamaha's Linear Damping circuit cancels the effect of these variations, maintaining a high, stable damping factor for superior sound articulation and frequency response.

#### High Grade Construction with Independent Chambers and Anti-Vibration Design (RX-Z9)

The RX-Z9 uses a heavy-duty, rigid chassis construction with separate individual chambers for left and right power amplifiers, power supply and control section to prevent any chance of interference. This thick chassis has electromagnetic shielding. The extremely

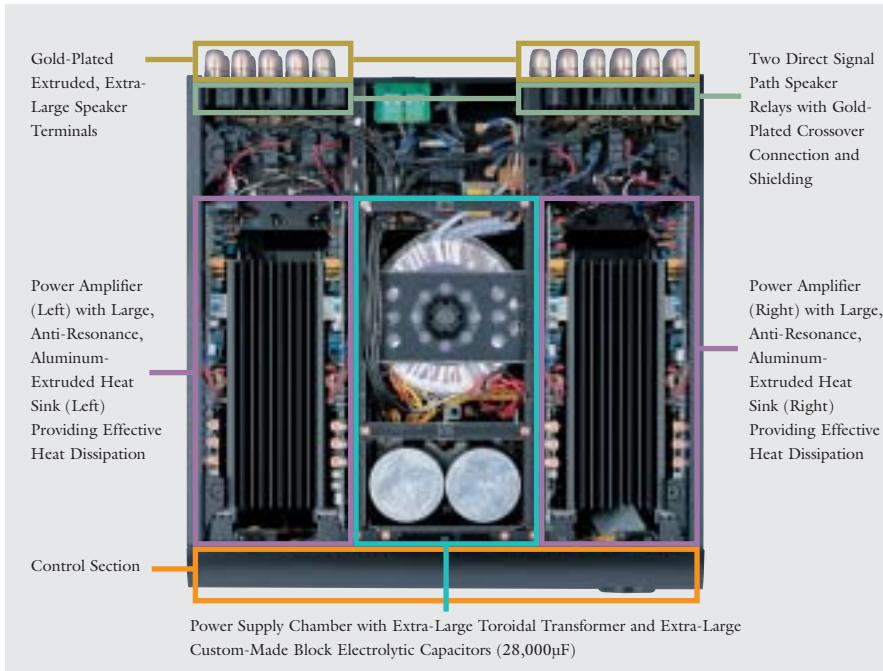
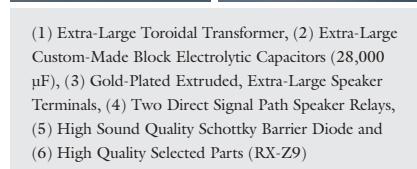


large aluminum-extruded heat sinks have anti-resonance characteristics and ensure effective heat dissipation. Yamaha's ToP-ART base and feet provide stability and further vibration-damping. The other receivers use many of these same design features.

#### Only the Finest Parts are Used

At this degree of extreme sound quality, each and every part in the receiver makes a difference. Yamaha technicians tested, selected and in many cases custom-designed all parts, and then tested them in groups to ensure that they sounded good together. Particularly noteworthy parts, in addition to the transformer and capacitors, include:

- Schottky Barrier diodes that allow fast switching for high S/N ratio (RX-Z9).
- High performance FE Mica capacitors and Metric Mylar Film capacitors using polypropylene material.
- Thick PC board wiring with 5/8" diameter copper jumper cables.
- Two direct signal path speaker relays with gold-plated crossover connections and shielding.



(1) Extra-Large Toroidal Transformer, (2) Extra-Large Custom-Made Block Electrolytic Capacitors (28,000 $\mu$ F), (3) Gold-Plated Extruded, Extra-Large Speaker Terminals, (4) Two Direct Signal Path Speaker Relays, (5) High Sound Quality Schottky Barrier Diode and (6) High Quality Selected Parts (RX-Z9)



# Easiest to Use

Each generation of Yamaha receivers brings an evolution of our popular features while adding innovative enhancements to improve the operating experience. This is why even though our receivers are the most technologically advanced, they remain remarkably easy to use and enjoy. Although these receivers look like formidable machines, you'll soon appreciate just how convenient and enjoyable they are to use.

## A World's First! — YPAO (RX-Z9, RX-V2400, RX-V1400, RX-V750 and RX-V650)

The RX-Z9, RX-V2400 and RX-V1400 are the first receivers to give you the benefits of a 10-band [RX-V2400 and RX-V1400: 7-band] (selected from 25 bands) parametric equalizer, which automatically modifies the audio output to provide precisely the best sound for the acoustics of the room. The unit comes supplied with a high precision Optimizer Microphone, which you simply place in the position where you most frequently



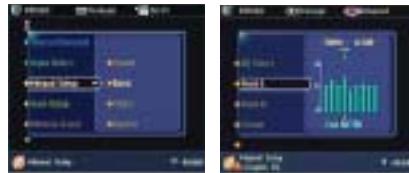
RX-Z9 Optimizer Microphone

listen. Activating the YPAO function causes test tones to be emitted from the speakers. These tones are picked up by the Optimizer Microphone and then analyzed. Based on the results, a variety of audio parameters are precisely calibrated to optimize the sound at the listening position. You enjoy not only better sound, but the BEST sound for each and every room.

## On-Screen Display with GUI and Dedicated Remote Control (RX-Z9)

The RX-Z9 has the best looking and easiest to use on-screen display you've ever seen. This is due in part to the high quality video circuitry, which provides sharp, clear images. The GUI (Graphical User Interface) includes extensive yet easily understandable setup menus and has been designed to make it easy to select and adjust desired functions.

And to further simplify operation,



Yamaha has provided a second remote control dedicated to GUI use. The large round cursor control in the center makes it easy to navigate the on-screen menus and enter desired commands. It also has power, volume and mute buttons.



## Easy Setup and Operation

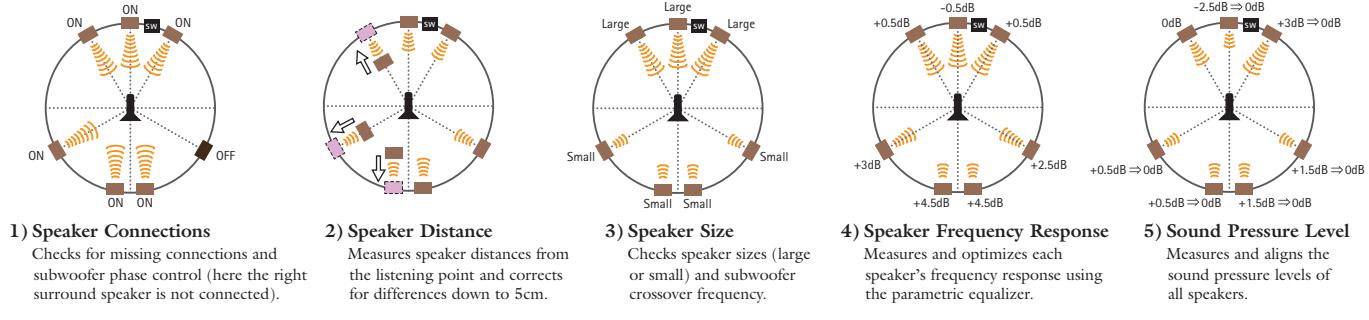
An ergonomic design ensures simple, convenient operation. Everything from the layout of the controls to the display menus has been planned to make using it easy and enjoyable.

## Program Name and Surround Sound Indications

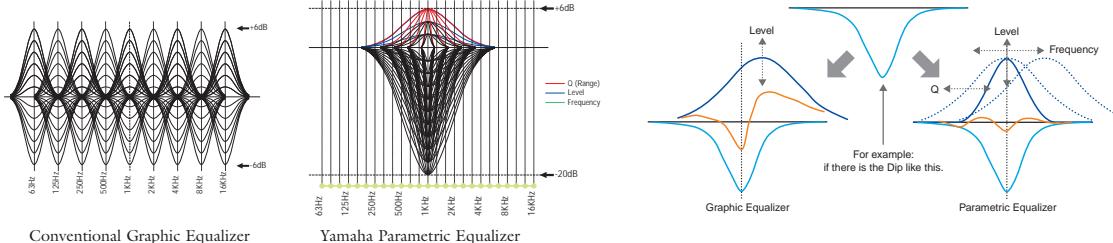
The front panel display presents comprehensive information about operating status, including the program name, whether it is a Tri-Field CINEMA DSP or Quad-Field CINEMA DSP program, and much more. You'll never be confused about what mode you are in.



## YPAO Acoustic Customization (RX-Z9, RX-V2400 and RX-V1400)



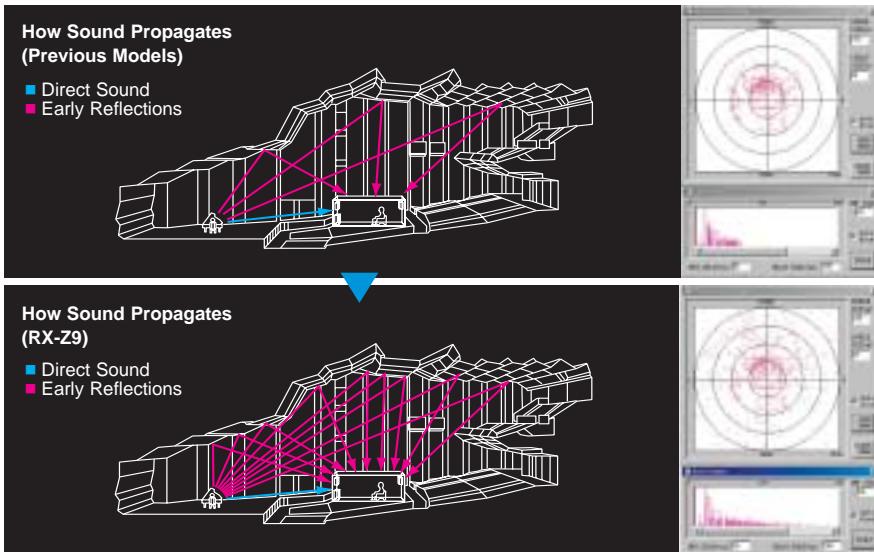
## Graphic Equalizer vs. Parametric Equalizer



\* RX-Z9; RX-V2400 and RX-V1400: 7-band

# Best Surround Realism

## Triple the Density



## Double the Speed



### High Definition CINEMA DSP Technology (RX-Z9)

The RX-Z9 has six times greater DSP capacity than previous models, thanks to an increase from 48kHz to 96kHz/24-bit A/D converters that can accept 96kHz signals for direct digital conversion and processing. Higher density processing enables approximately triple the amount of early reflection data to be handled, for significantly richer surround sound performance. The RX-Z9 also employs 192kHz/24-bit D/A conversion and DSP processing and Yamaha's 32-Bit Floating-Point Quantization System LSIs (four YSS-930s) for high precision decoding of Dolby Digital, DTS Digital Surround, DTS 96/24, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, DTS Neo:6 and Dolby Pro Logic IIx formats.

Conventional multi-channel systems base their sound on Dolby Digital and DTS decoding, using relatively simple matrix and steering techniques to create surround sound effects. Yamaha's CINEMA DSP Digital technology is much more sophisticated. It naturally decodes the Dolby Digital and DTS movie sound formats, but it also draws on a huge memory of real-world data from actual venues (especially for the music programs) and input from movie sound technicians. This data is stored and processed on Yamaha-developed LSIs, the most powerful audio chips in the world.

### Way Beyond Ordinary Surround Sound

Our latest technology, Quad-Field CINEMA DSP actually creates four independent sound fields (front, surround left, surround right and surround back) that merge to envelop

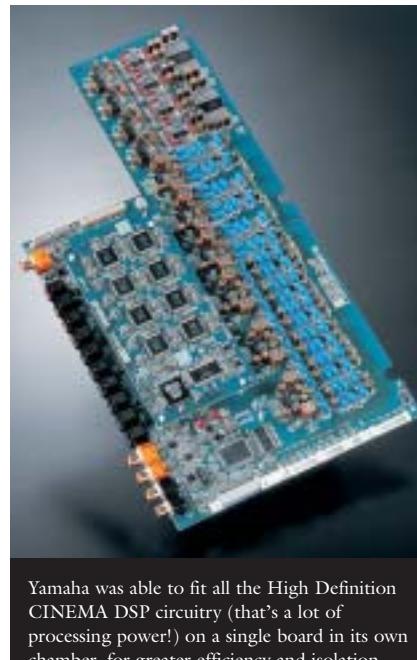
you in an unmatched surround sound experience. You hear movies and music with accurate sound localization, smooth movement across the sound space, exceptional clarity and remarkably realistic presence. It will seem as if the walls of your room have disappeared and you are in the middle of your own immense theater!

### Yamaha Uses Actual Sound Field Data

Yamaha developed a technique called Single Point Quad Miking to precisely capture the acoustic patterns of sound spaces. This complex data is stored and processed on extremely sophisticated LSIs designed and manufactured by Yamaha.

### 4-Layer DSP Processing Board

All of the DSP IC chips and related circuitry are located together on a 4-



Yamaha was able to fit all the High Definition CINEMA DSP circuitry (that's a lot of processing power!) on a single board in its own chamber, for greater efficiency and isolation from possible interference.

layer board, which provides a number of advantages. The dimensions are smaller (2/3 previous types), so signal paths are shorter and there is more space for the large power supply components. Digital interference is reduced and impedance is lower as well.

### Yamaha's Exclusive YSS-930 32-Bit Floating Point Quantization LSI (RX-Z9, RX-V2400 and RX-V1400)

This powerful LSI performs all Dolby Digital and DTS decoding with extreme accuracy, as well as all digital sound field processing, capabilities that previously required two or more chips. It also outperforms other chips in the precise synchronization of images and sound.

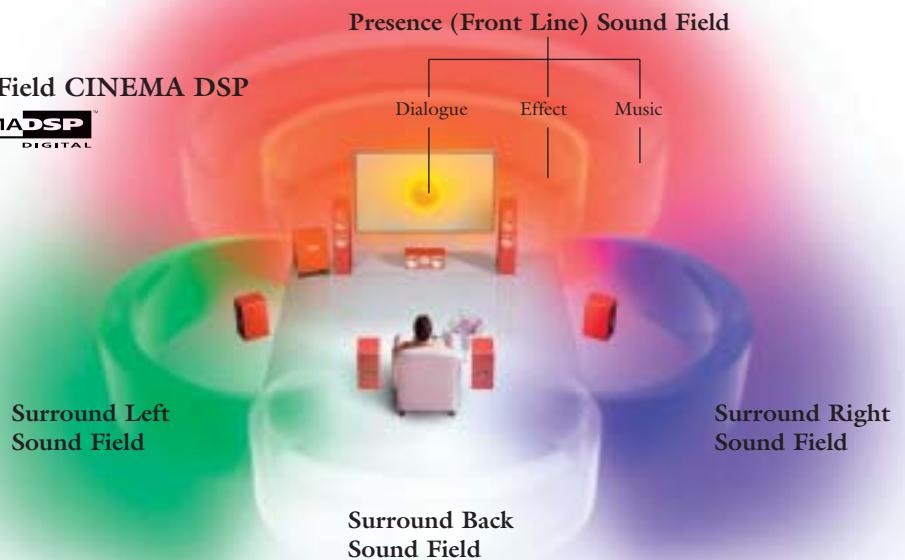




## Conventional 7.1-Channel Systems



## Quad-Field CINEMA DSP



### Audio Delay for Adjusting Lip-Sync

A Yamaha LSI provides synchronization of images and sound, which is called lip-sync. The video signal goes through the video processor circuit before it is displayed, which takes time, so it lags behind the audio. The LSI accurately aligns them and even allows the lip-sync parameters to be adjusted using the Audio Delay mode.

### CINEMA DSP Programs and THX Programs

One of the main advantages of CINEMA DSP is the large choice of sound field programs available. The basic program for movies is Enhanced, which greatly improves the sound of the surround fields. The "largest" of these sound fields is Spectacle, which recreates the open feeling of large-scale, epic motion pictures. The Sci-Fi, Adventure and General programs provide the optimum sound fields for those movie genres.

There are also THX programs\*.

\* THX Ultra2>Select are the surround programs for home use, based on the THX Theater processing developed for movie theater surround sound.

### Night Listening Mode

When you're listening to movies late at night and turn down the volume during loud scenes, dynamic range suffers and you may miss some dialogue and other sounds. By using the Night Listening Mode, you can reduce the volume and still enjoy proper tonal balance and dynamic range. You hear dialogue clearly and the music and action are just as exciting (without the screams and explosions disturbing others).

### Enjoy Surround Sound through Headphones

SILENT CINEMA makes it possible to hear large-scale surround sound through ordinary headphones! This is a variation of CINEMA DSP technology that

Yamaha developed to let you listen in private to movies and other multi-channel sources for hours without listening fatigue.



### Surround Sound from Only Two Speakers

With just two left and right speakers, the Virtual CINEMA DSP mode will create two additional "virtual" rear speakers, giving you the sense of being in a full-scale surround sound field. So even in rooms with no space for rear speakers, you can enjoy the exciting effects of Dolby Digital and DTS movie sound formats.

# Only Yamaha Could Set These Goals for a Home Theater

Yamaha introduces a new benchmark for receiver performance: the RX-Z9. This flagship model goes beyond the capabilities of previous high-end Yamaha models with High-Definition CINEMA DSP technology, the ability to automatically optimize the sound for the listening room, superior audio and video quality, and the operating ease that Yamaha is famous for. The high end just moved up a step.

DIGITAL  
TOP·ART



## RX-Z9 Digital Home Theater Receiver

CINEMA DSP™

SILENT™  
CINEMA

DOLBY  
DIGITAL EX  
PROLOGIC™

DTS 24bit 96kHz  
SURROUND EX  
HDMI

THX

DCDI

ONKYO  
by FAROUJDIA

ONKYO  
by FAROUJDIA

### 9-Channel Amplifier Capable of Delivering 1,290W

When you power up your carefully assembled, top class home theater system, you expect beautiful sound and video quality, but you also want plenty of raw power. Especially at dynamic peaks, such as explosions or the climax of rock songs, you want to be thrilled and awed, without a hint of distortion marring the moment. The RX-Z9 is built to satisfy your urge for power, surrounding you front, sides and rear with seven channels capable of outputting a huge 170 W each, plus another 50W from the two presence (front effect) channels. That's a total

of 1,290W. Movies will sound as if you're in the director's chair, and you can even enjoy multi-channel sources from only four or five speakers (even without a subwoofer, although this is not recommended), thanks to an analog mixdown mode. Another point to consider is that because of this high power capability, at normal listening levels the amplifier won't be working as hard, so distortion levels are virtually zero.

### Superior Digital-to-Analog Converter System

For the important digital-to-analog converters, Yamaha has chosen the

PCM1792 manufactured by the high-end audio expert, Burr-Brown. The RX-Z9 uses these DACs for all channels. The PCM1792 is a high-performance, precision 24-bit DAC with ultra-low distortion of only 0.0004% (THD + N) and S/N ratio of 129dB. It offers superior low level linearity, with excellent full-scale performance under varying operating conditions. Its major benefit is performing accurate sound field processing for high quality multi-channel reproduction such as Dolby Digital and DTS. For two-channel stereo, the PCM1792 provides outstanding separation and accurate musical delineation. An



### RX-Z9 Rear Panel Connections

- 7 Optical, 4 Coaxial Digital Inputs (fixed and assignable)
- 3 Optical Digital Outputs (fixed and assignable)
- 7 A/V and 5 Audio Inputs, 3 A/V and 3 Audio (Audio Signal) Outputs, and Zone 2 Audio Outputs
- 6 Component Video Inputs (fixed and assignable) and 2 Monitor Component Video Outputs
- 2 Monitor (with S-Video) Outputs, 7 Video Inputs /3 Video Outputs (with S-Video), and Zone 2 Video (with S-Video) Output
- Pre-Main and Center Couplers, Surround, Surround Back and Presence Preouts, and Subwoofer Outputs
- 8-Channel External Decoder Input
- RS-232C Interface for Custom Installation
- 2 Trigger Outputs for Automatic Power on of Other Components (+12V, 15mA)
- Remote Control IR Code Input/Output
- Zone 2 Coaxial Digital Output Terminal
- i.LINK (IEEE 1394) Digital Audio Interface
- Pure Direct 2-Channel Inputs

# Receiver — and Achieve Them!

additional advantage is its 192kHz/24-bit conversion capability, making it compatible with the latest (and future) high resolution digital audio sources.

## 55 Surround Sound Programs

The RX-Z9 offers a huge range of 55 surround sound programs to choose from, plus another 24 variations of the CINEMA DSP movie programs. For video material, you can select the program that matches your video source, with 12 choices from games and TV sports to Sci-Fi movies. For music, you have 21 choices ranging from European concert halls to disco ambience. Each sound field is created from acoustic data recorded at the actual venues, stored and processed by highly sophisticated Yamaha technology. There are also 16 straight movie format decoding programs and 6 THX programs, including Ultra2. Naturally, you can experiment with different programs for each source, and you can also use the GUI menus to adjust numerous parameters for each program. With CINEMA DSP, you will never be bored or dissatisfied with the sound of your system!!

## Ideal for Use in Custom Installations

The RX-Z9 has numerous features designed to facilitate use in customized multi-room installations. These include Zone 2 coaxial, video (including S-Video) and audio outputs for multi-room control capability, two trigger outputs for automatic power-on of other components, speaker A/B and A+B selection, an RS-232C interface and remote control IR code input/output compatibility. In addition, the Rec Out Selector also functions as a Zone 2 selector.



Oil-Damped Hidden Control Panel

## Extensive Connections for All the Components You Want!

As shown here, the range of connections on the RX-Z9's rear panel is large enough to meet all of your system building needs. Note that a number of these terminals are fixed and assignable, meaning that they can be independently assigned to sources of your choice or defaulted to fixed settings.

## Video Inputs on Front Panel

A panel on the front of the receiver flips up to reveal a number of controls and video input terminals. These include video and audio terminals as well as optical digital and S-Video inputs. This makes it convenient to connect a game machine for DVD games or even movies, or other devices such as a camcorder.

## Subwoofer Crossover Selection

The RX-Z9 provides a choice of nine subwoofer crossover frequencies: 40, 60, 80, 90, 100, 110, 120, 160 and 200 Hz. In addition to providing a wider range than other receivers, the steps from 80 to 120 Hz are only 10 Hz apart for more precise selection. This choice of crossovers lets you "fine-tune" the audio system by selecting the optimum frequency to maximize receiver/speaker efficiency and also ensures best performance from a wider variety of speakers (small to large).

## Other Notable Features

- Auto surround decoder and auto priority input terminal selection
- High dynamic power, low impedance drive capability
- A/V Rec Out/Zone 2 selector
- 8-channel external decoder input terminals
- Audio Delay for adjusting lip-sync
- Speaker configuration of analog multi-channel input (C, SL, SR, SBL, SBR, Subwoofer and None)
- Level setting for each input
- S-Video 1/2 wide selective signal compatibility
- 9-band graphic equalizer
- Digital tone controls
- 40-station preset tuning
- Direct-access (macro-command, learning and preset capable) remote unit



RX-Z9 Optimizer Microphone



## RX-Z9 Inputs and Outputs

	Analog		Digital				Video			
	In	Out	In	Out	In	Out	In	Out	In	Out
PHONO	■			■						
CD	■			■						
MD/TAPE	■		■		■					
CD-R	■	■	■		■					
DVD	■		●		■		■		■	
DTV/LD	■		■		■		■		■	
CBL	■		■		■		■		■	
SAT	■		■		■		■		■	
VCR 1	■	■	■		■		■		■	
VCR 2	■	■	■		■		■		■	
DVR	■	■	■		■		■		■	
Video Aux	■			■			■			
Monitor Out 1							■		■*	
Monitor Out 2							■		■*	
ZONE 2		■					■			
Multi-Ch	■									
Pure Direct 2 Ch	■									

Fixed (■), Fixed/Assignable (■) and Assignable (●) Terminals.

RF (AC-3) terminal for LD input (●) is assignable as coaxial digital terminal.

### \*: HDTV (720p/1080i) Compatible Component Video Out

The frequency response of the component video monitor out signal is 5Hz – 200MHz, making it compatible with HDTV monitors.

# Ideal as the Main Component of a Top-Class Home Theater System, Providing the Finest Sound Quality and Extensive Control.

The RX-V2400 is a high performance, technologically advanced receiver that will provide all the power and control necessary for any high quality home theater system. Major features include 7-channel discrete amplification (120W x 7), Yamaha's Digital ToP-ART design concept, YPAO, Quad-Field CINEMA DSP, 33 surround programs, full movie sound format compatibility, SILENT CINEMA, Night Listening mode, and component video up conversion for optimum video quality.

DIGITAL  
TOP-ART



## RX-V2400 Digital Home Theater Receiver

CINEMA DSP DIGITAL

SILENT CINEMA

DOLBY DIGITAL EX PROLOGIC

dts 96/24 PROES

THX DOLBIEUDIO

### 7-Channel High Power Amplifier

The RX-V2400 delivers 120W to each of seven channels: two front, one center, two surround and two surround back. 120W is far more than enough for home theater use, allowing considerable headroom for musical peaks, movie explosions and other power-sapping sounds. Equal output capability to all channels ensures that you hear all sounds with the full effect that the director intended.

### YPAO for Automatically Optimizing the Sound in Your Room



The receiver comes supplied with a small microphone, which you place at listening position. Activating the function causes a test tone to be emitted, which is analyzed, and based on the results, the audio output is adjusted to provide the optimum sound for the room acoustics. The optimizer

functions as a parametric, not merely a graphic, equalizer, providing a professional degree of precision calibration.

### Custom Installation Compatibility

The RX-V2400 has numerous features that make it ideal for use in custom installations. It provides Zone 2 output with selector and volume control, and Zone 3 output with selector, so you can enjoy audio in two additional rooms. Zone 2 output has an S-video output terminal as well as power amp assignability. Speaker A/B and A+B selection lets you listen to either or both of two sets of speakers in two locations, with Virtual CINEMA DSP capability in Zone 2. You can also enjoy sound from the presence (front effect) speakers in Zone 2. Two +12V Trigger Outputs can be used to automatically power on Zone 2 or Zone 3 components.

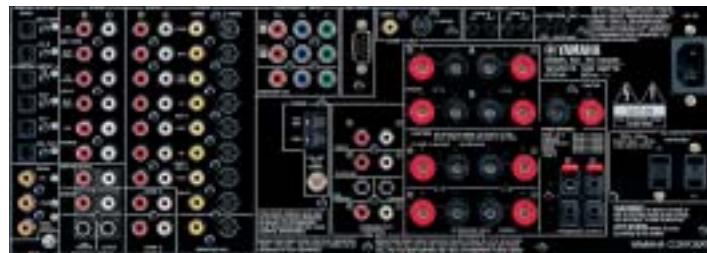


Oil-Damped Hidden Control Panel includes S-Video input and optical digital input terminals for connecting game machines, digital equipment, and so on.

There are also two IR ports, with extended IR code compatibility.

### Other Notable Features

- Accurate Touch Volume Control for All Channels
- Audio Delay for Adjusting Lip-Sync (0–240ms)
- SILENT CINEMA
- A/V Rec Out/Zone 2 Selector
- On-Screen Display
- Dialogue Lift
- 40-Station Preset Tuning
- Direct-Access Remote Unit



### RX-V2400 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V2400 provides 7-channel (front/center/surround/surround back) preout terminals, 6-channel external decoder input terminals (8-channel compatible), a subwoofer output terminal, RS-232C interface and remote control IR Code input/output for custom installation, and two Trigger Outputs (+12V) for automatic power on of other components. It also offers 9-channel speaker terminals. The detachable power cable is separate, rather than attached to the unit, and is a thicker type than usual, for higher power handling capacity.

### RX-V2400 Inputs and Outputs

	Analog		Digital		Video		Compo. V.**
	In	Out	Coaxial	Optical	Composite	S-Video	
PHONO	■						
CD	■		■				
CD-R	■		■				
MD/TAPE	■		■				
DVD	■		■	■			
DTV	■		■	■			
CBL/SAT	■		■	■			
VCR 1	■	■	■	■			
DVR/VCR 2	■	■	■	■			
VIDEO AUX*	■			■			
MONITOR OUT					■		
ZONE 2 OUT		■			■		
ZONE 3 OUT					■		

\* HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■■) and Assignable (■) Terminals

\*\* Video Aux terminals are on front panel. \*\*Comp. V. Component Video

## Enjoy Movies and Music with Astonishing Realism and Clarity in Your Own Acoustically Customized Home Theater.

The RX-V1400 is a top-grade receiver that will provide all the power and control necessary for any high quality home theater system. It introduces the new YPAO, which automatically adjusts the output from each speaker for the best possible sound at your listening position. Other major features include 7-channel discrete amplification (110W x 7), Yamaha's Digital ToP-ART concept, Quad-Field CINEMA DSP, 31 surround programs, full movie sound format compatibility, SILENT CINEMA, Night Listening mode, and component video up conversion.

DIGITAL  
ToP-ART



## RX-V1400

Digital Home Theater Receiver

CINEMA DSP™  
DIGITAL

SILENT CINEMA

DOLBY DIGITAL EX PRO LOGIC EX

dts 96/24 NEOS

THX SURROUND EX

### Digital ToP-ART

Yamaha's Digital ToP-ART design concept combines the latest and best technologies, parts and circuit designs to maximize sound quality. Among its outstanding features are 192kHz/24-Bit D/A Conversion for all channels, a 32-Bit Floating-Point Quantization System LSI (YSS-930) for CINEMA DSP processing, and an Accurate Touch Volume Control that governs all channels.

### 31 Surround Sound Programs

The wide range of sophisticated surround sound programs is one of the main benefits of Yamaha receivers. Viewers/listeners can match the program to the type of movie they are watching or the type of music they are listening to. They can also have fun trying different combinations. The 31 programs offer a total of 55 variations.

### Digital Sound Field Processing for Sensational Movie Sound

The RX-V1400 uses a powerful 32-bit Yamaha-developed LSI to provide an astounding range of realistic music and movie sound via 31 surround programs. It is of course compatible with the latest movie sound formats, including Dolby Pro Logic IIx, and also provides 2 THX programs.

### Component Video Up Conversion

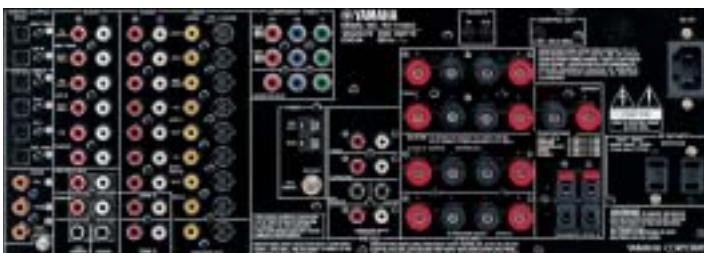
Up video conversion (composite to S-Video and component, S-Video to component) and well as down video conversion (S-video to composite) is automatically applied to incoming signals. This means that you simply use the best possible cable between the receiver and the TV, and then whatever the source is, you are assured of getting the highest possible quality.



Oil-Damped Hidden Control Panel includes S-Video input and optical digital input terminals for connecting game machines, digital equipment, and so on.

### Other Notable Features

- Auto Surround Decoder and Auto Priority Input Terminal Selection
- Audio Delay for Adjusting Lip-Sync (0–240ms)
- Linear Damping
- SILENT CINEMA
- Night Listening Mode
- On-Screen Display
- Dialogue Lift
- 40-Station Preset Tuning
- Learning-Capable and Preset Remote Unit



### RX-V1400 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V1400 provides 7-channel (front/center/surround/surround back) preout terminals, 6-channel external decoder input terminals (8-channel compatible), a subwoofer output terminal, and remote control IR Code input/output for custom installation, and +12V Trigger Output for automatic power on of other components. It also offers 9-channel speaker terminal. The detachable power cable is separate, rather than attached to the unit, and is a thicker type than usual, for higher power handling capacity.

### RX-V1400 Inputs and Outputs

	Analog		Digital		Video							
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PHONO	■											
CD	■			■								
CD-R	■			■								
M/D/TAPE	■			■								
DVD	■			■								
DTV				■								
CBL/SAT				■								
VCR 1	■			■								
DVR/VCR 2	■			■								
VIDEO AUX*	■											
MONITOR OUT												
ZONE 2 OUT	■											
ZONE 3 OUT	■											

\* HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■) and Assignable (■) Terminals

\* Video Aux terminals are on front panel. \*\*Comp. V: Component Video

# Superb All-Around Performance Sure to Satisfy All Home Theater Enthusiasts

This 7.1-Channel Digital Home Theater Receiver provides an astounding array of home theater functions including YPAO Acoustic Customization, Quad-Field CINEMA DSP and 29 Surround Programs, Pure Direct mode for highest signal purity, component video up conversion, and SILENT CINEMA. 700W (100W x 7) discrete power amplification ensures that movies will sound spectacular.

DIGITAL  
ToP-ART



## RX-V750 7.1-Channel Digital Home Theater Receiver

CINEMA DSP™  
DIGITAL

SILENT CINEMA™

DOLBY DIGITAL EX PRO LOGIC IIx™  
DTS 96/24™

### YPAO for Automatically Optimizing the Sound in Your Room

Yamaha's unique YPAO system analyzes the acoustics of the room and adjusts various speaker parameters to provide the optimum sound at the listening position.

It's like having a professional audio engineer tweak your system.



### Pure Direct Mode

Pure Direct is a special listening mode that provides the highest possible signal purity. It can be used for both analog and digital sources, with two-channel or multi-channel inputs. When it is selected, the signal follows the most direct path, and power to the video circuit is shut down.

### Component Video Up Conversion

The RX-V750 provides component video up conversion (composite to S-Video and

component, S-Video to component) as well as down video conversion (S-video to composite), which is automatically applied to incoming signals. You simply use the best cable between the receiver and TV, and are assured of getting the highest quality whatever the source.

### Create a 9-Speaker System

You can use the surround back left and right channel outputs to create a 9-speaker system, by assigning them to the two presence speakers or to two Zone 2 speakers.

### Audio Delay for Adjusting Lip-Sync

Yamaha's powerful YSS-948 LSI has the necessary speed and precision to achieve accurate synchronization of images and sounds, which is called lip-sync. By using the Audio Delay mode, lip-sync parameters can be adjusted when necessary.

### Other Notable Features

- Digital ToP-ART and High Current Amplification
- Dolby Pro Logic IIx and DTS 96/24 Compatible
- Night Listening Enhancer (Cinema/Music)
- Dialogue Lift
- SILENT CINEMA
- On-Screen Display
- 192 kHz/24-Bit DACs for All Channels
- Accurate Touch Volume Control
- Selectable 9-Band Subwoofer Crossover / Phase Select
- Analog Mixdown
- Straight/Effect Switch
- 2-Channel Stereo Mode
- Linear Damping
- Phono Input
- Custom Installation (Zone 2) and Speaker B
- Learning-Capable and Preset Remote Unit



### RX-V750 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V750 provides 7-channel (front/center/surround/surround back) preout terminals, a subwoofer output terminal, 8-channel external decoder input terminals, remote control IR Port and +12V Trigger Out, and front panel video aux input terminals including optical digital and S-Video.

### RX-V750 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PHONO	■			■			■					
CD	■			■			■					
MD/CD-R	■	■			■		■					
DVD	■		■		■		■		■			
D-TV/CBL	■			■			■		■			
VCR 1	■	■		■			■		■			
VCR 2/DVR	■	■	■		■		■		■			
VIDEO AUX*	■			■			■		■			
MONITOR OUT							■		■			
ZONE 2 OUT		■										■

■ HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■) and Assignable (■) Terminals

\* Video Aux terminals are on front panel.

## Powerful 7.1-Channel Receiver Offering Outstanding A/V Performance, Plus the Benefits of Special Yamaha Features.

The RX-V650 is a 7.1-Channel Receiver with an extensive range of home theater functions including YPAO Acoustic Customization, Quad-Field CINEMA DSP and 29 surround programs, Pure Direct mode for highest signal purity, S-video up conversion, and full movie and music format compatibility. 665W (95W x 7) discrete power amplification makes movies and music thrillingly dynamic.

DIGITAL  
ToP-ART



### RX-V650 7.1-Channel Digital Home Theater Receiver

CINEMA DSP DIGITAL

SILENT CINEMA

DOLBY DIGITAL EX PRO LOGIC IIx

dts 96/24

#### Quad-Field CINEMA DSP and 29 Surround Programs

Yamaha's ultra-sophisticated Quad-Field and Tri-Field CINEMA DSP technology creates thrillingly realistic soundscapes in your room. 29 surround programs provide full format compatibility and extensive listening choices.



#### 192kHz/24-Bit DACs for All Channels

The RX-V650 uses extremely high performance 192kHz/24-bit digital-to-analog converters for all channels. The DACs provide accurate sound field reproduction for high quality multi-channel sources, and outstanding separation and precise musical delineation for two-channel sources.

#### Night Listening Enhancer

During low-volume listening, such as late at

night, dynamic range suffers and you may miss some sounds. The Night Listening Enhancer offers two modes, Cinema and Music, with three-level selectability, which will ensure that you don't miss movie dialogue or quiet passages, or lose overall surround spaciousness.

#### Preout Terminals for All 7 Channels

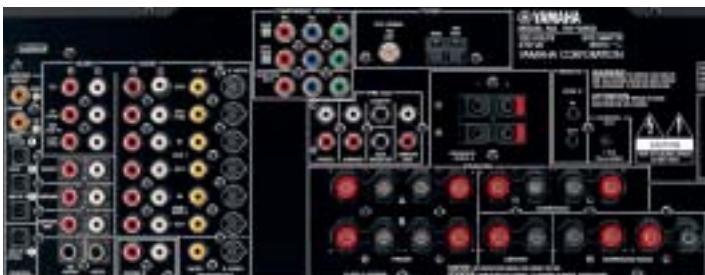
Preout terminals are provided for the two front, two surround, center, two surround back and subwoofer channels so these outputs can be fed to one or more additional amplifiers for those desiring even higher levels of power.

#### S-Video Up Conversion

The RX-V650 automatically converts the input signal (composite to S-Video, S-Video to composite) to match the system's monitor/TV.

#### Other Notable Features

- Digital ToP-ART and High Current Amplification
- Surround Back Power-Amp Assignable (For Zone2 or Presence)
- Pure Direct
- Dolby Pro Logic IIx and DTS 96/24 Compatible
- Audio Delay for Adjusting Lip-Sync (0-160ms)
- 9ch Speaker Outputs (For Zone2 or Presence)
- Dialogue Lift
- Custom Installation (Zone 2) and Speaker B
- SILENT CINEMA
- Accurate Touch Volume Control
- Selectable 9-Band Subwoofer Crossover / Phase Select
- Straight/Effect Switch and 2-Channel Stereo Mode
- Preset Remote Control Unit



#### RX-V650 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V650 provides 7-channel (front/center/surround/surround back) preout terminals, a subwoofer output terminal, 8-channel external decoder input terminals, remote control IR Port and +12V Trigger Out, and front panel aux input terminals including optical digital and S-Video.

#### RX-V650 Inputs and Outputs

	Analog		Digital		Video					
					Coaxial	Optical	Composite	S-Video	Component Video	
	In	Out	In	Out	In	Out	In	Out	In	Out
CD	■		■		■		■			
MD/CD-R	■	■	■		■	■				
DVD		■	■	■	■					
D-TV/CBL	■		■		■	■	■			
VCR 1	■	■	■		■		■	■		
VCR 2/DVR	■	■	■		■	■	■	■		
VIDEO AUX*	■		■		■		■	■		
MONITOR OUT							■	■		
ZONE 2 OUT							■	■		■

\* HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■) and Assignable (■) Terminals

\* Video Aux terminals are on front panel.

# Impressive Audio Capabilities and a Wide Array of Appealing Features.

This 6.1-Channel Receiver provides full home theater enjoyment with 540W (90W x 6-channel discrete configuration) of high-quality power and functions that include Quad-Field CINEMA DSP, 29 surround programs, SILENT CINEMA, Night Listening Enhancer, Dolby Pro Logic IIx compatibility and custom installation capability.

DIGITAL  
ToP-ART



## RX-V550 6.1-Channel Digital Home Theater Receiver

CINEMA DSP™  
DIGITAL

SILENT CINEMA

DOLBY DIGITAL EX PRO LOGIC IIx

dts 24 BIT

### Digital ToP-ART and High Current Amplification

The Digital ToP-ART design concept combines the latest and best technologies, parts and circuit designs to maximize sound quality. High Current Amplification uses superior components to achieve high current power with low impedance from input (power supply circuit) to output (speaker terminals).

### Direct Stereo Mode

Direct Stereo causes the input stereo signal to bypass the DSP circuitry so the pure signal is output without any processing or data loss whatsoever.

### Custom Installation Compatibility

Yamaha has made it easy to use this receiver in multi-room custom installations. Zone 2 Out allows the audio signal to be output in a second room, and you can even enjoy audio in three

different rooms by using main zone speaker output, Speaker B output, and Zone 2 output. A +12V Trigger Output can be used to automatically power on Zone 2 components. There is also an IR port, with extended IR code compatibility.

### Audio Delay for Adjusting Lip-Sync

Yamaha's powerful YSS-948 LSI has the necessary speed and precision to achieve accurate synchronization of images and sounds, which is called lip-sync. By using the Audio Delay mode, lip-sync parameters can be adjusted when necessary.

### Aluminum Front Panel

The aluminum front panel effectively shields sensitive low-level circuitry from external noise and electronic radiation generated by sources such as fluorescent lights and video displays. It helps ensure optimum sonic performance in any environment.

### Other Notable Features

- 192 kHz/24-Bit DACs for All Channels
- Selectable 9-Band Subwoofer Crossover
- Subwoofer Phase Select
- Analog Mixdown
- Straight/Effect Switch
- 2-Channel Stereo Mode
- SILENT CINEMA
- High Dynamic Power
- Linear Damping
- Wide-Range Audio Frequency Response for DVD-Audio/SA-CD Compatibility
- Speaker A, B or A+B Selection (Front L/R)
- Program Name and Sound Field Indications
- Virtual CINEMA DSP
- 40-Station Preset Tuning
- Auto Preset Tuning
- Preset Remote Control Unit with Colored Buttons



RX-V550 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V550 provides +12V Trigger Out, IR port, 6-channel external decoder input terminals and a subwoofer output terminal. All speaker terminals are 2-way binding post type (banana plug compatible).

RX-V550 Inputs and Outputs

	Analog		Digital				Video					
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
CD	■		■		■		■					
MD/CD-R	■	■	■		■	■	■	■				
DVD	■		■		■	■	■		■			
D-TV/CBL	■		■		■	■	■		■			
VCR	■	■	■		■	■	■	■	■	■		
VIDEO AUX*	■		■		■	■	■		■		■	
MONITOR OUT									■		■	
ZONE 2 OUT		■										■

\* HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■) and Assignable (■) Terminals

\* Video Aux terminals are on front panel.

## You Will Be Amazed at How Much This Economical Model Has to Offer.

The RX-V450 6.1-Channel Receiver delivers 510W (85W x 6) high power discrete amplification. Its wide range of features will provide all the control and convenience that a sophisticated home theater system should have. Features include Quad-Field CINEMA DSP with 29 Surround Programs, Direct Stereo, adjustable subwoofer crossover and much more.



The previous RX-V440 has been honoured with an EISA Award for Home Theater Receiver 2003-2004. The prestigious EISA Awards are chosen by media representatives from up to 20 European countries.

DIGITAL  
TOP-ART



## RX-V450 6.1-Channel Digital Home Theater Receiver

CINEMA DSP  
DIGITAL

SILENT CINEMA

DOLBY DIGITAL EX PRO LOGIC IIx

dts 96/24

**Straight and 2-Channel Stereo Modes**  
All four 50 series receivers also offer two other special operation modes for higher quality. Straight outputs the original analog or digital signal without any post-processing. 2-Channel Stereo processes the multi-channel signal and outputs it via two channels, for use with a two-speaker system.

### SILENT CINEMA and Virtual CINEMA DSP

SILENT CINEMA makes it possible to hear large-scale surround sound through ordinary headphones! This is a variation of CINEMA DSP technology that Yamaha developed to let you listen in private to movies and other multi-channel sources for hours without listening fatigue. Virtual CINEMA DSP lets you enjoy the effects of CINEMA DSP surround sound without using surround speakers.

### Subwoofer Crossover Selection

This receiver provides a choice of nine subwoofer crossover frequencies: 40, 60, 80, 90, 100, 110, 120, 160 and 200 Hz. This lets you "fine-tune" the audio system by selecting the optimum frequency to maximize receiver/speaker efficiency and also ensures best performance from both large and small speakers.

### 2 Component Video Input Terminals

Component Video inputs offer higher quality than normal composite inputs, for use with units such as DVD players that have Component Video output. The RX-V450 allows you to connect two different components for a choice of high quality video sources. The RX-V450 also offers an HDTV compatible component video out.

### Other Notable Features

- Digital ToP-ART and High Current Amplification

- Audio Delay for Adjusting Lip-Sync (0–160ms)
- Dolby Pro Logic IIx and DTS 96/24
- Analog Mixdown
- High Dynamic Power
- Linear Damping
- Wide-Range Audio Frequency Response for DVD-Audio/SA-CD Compatibility
- Subwoofer Output
- Subwoofer Phase Select
- Speaker A, B and A+B Selection (Front L/R)
- Easy Menu Setup (Basic Mode)
- Program Name and Sound Field Indications
- 7-Band Center Graphic Equalizer
- Virtual CINEMA DSP
- 40-Station Preset Tuning
- Auto Preset Tuning
- Preset Remote Control Unit with Colored Buttons



### RX-V450 Extensive System Connections

In addition to the input and output terminals shown in the chart, the RX-V450 provides 6-channel external decoder input terminals and a subwoofer output terminal. All speaker terminals are 2-way binding post type (banana plug compatible).

### RX-V450 Inputs and Outputs

	Analog		Digital		Video			
	In	Out	Coaxial	Optical	Composite	Component Video	In	Out
CD	■		■		■			
MD/CD-R	■	■	■	■	■			
DVD	■		■	■	■			
D-TV/CBL	■		■	■	■			
VCR	■	■	■	■	■	■	■	■
VIDEO AUX*	■				■			
MONITOR OUT						■		■

\* HDTV (720p/1080i) Compatible Component Video Out

Fixed (■), Fixed and Assignable (■) and Assignable (■) Terminals

\* Video Aux terminals are on front panel.

## Slim-Line Components: Elegant Design with the Performance to Match.

The RX-SL100 is the world's slimmest receiver, designed to match the thin styling motif of flat-screen plasma and LCD monitors. Capable of powering and controlling a 6.1-channel home theater system, it features excellent performance with a 100W x 6 digital amplifier, Quad-Field CINEMA DSP, 28 surround programs, SILENT CINEMA, full compatibility with movie sound formats including Dolby Pro Logic IIx and convenient operation using on-screen display with GUI. For a system with elegant sound AND appearance, choose the RX-SL100 matched with the high performance DV-SL100.



### RX-SL100 Digital Home Theater Receiver

#### 100W x 6 Digital Amplifier

The RX-SL100 incorporates an extremely powerful and sophisticated amplifier. Rated power output is 100W to six channels. What's more the amplifier has an advanced digital design. It's highly efficient, so can be made smaller, and it delivers its power output with very low distortion.

#### Hear the Latest Movie Sound Formats

The decoding circuitry performs Dolby Pro Logic IIx, Dolby Digital, Dolby Digital EX, DTS, DTS-ES (Matrix 6.1 and Discrete 6.1), and DTS Neo:6 decoding with extreme accuracy for thrilling sound.

#### On-Screen Display with GUI

Operating this receiver is easy and intuitive, thanks to a newly designed GUI (Graphical User Interface), which is displayed on the screen for easy visibility and access via the remote control.



#### 28 Surround Programs with SILENT CINEMA and Night Listening Mode

Not only do you get spectacular surround sound, you get a choice of 28 different programs to match every source you listen to. SILENT CINEMA gives you a

surround sound experience through headphones, and the Night Listening Mode lets you reduce the volume and still enjoy proper tonal balance.

#### Front Panel Video Aux Input with Optical Digital Input Terminals

Front Panel Video Aux Input Terminals make it quick and easy to connect a camera, video game or other unit.

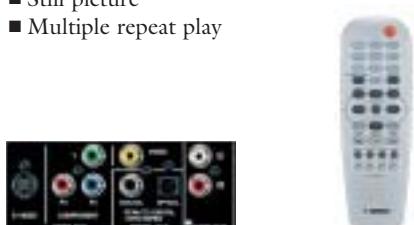


The RX-SL100 rear panel offers 2 optical and 1 coaxial digital input (fixed and assignable), 4 analog input, and 1 A/V and 1 audio output, composite monitor output, and subwoofer output terminals.

Special Playback functions, MP3 Navigation Display, playback of discs with both MP3 and JPEG files, and JPEG/MP3 Multisession compatibility.

#### Other Notable Features

- 54MHz/12-bit video D/A conversion for high picture quality
- 192kHz, 24-bit audio D/A converter
- Shuffle play
- Resume play mode with a 5-disc memory
- Screen saver
- Still picture
- Multiple repeat play



The DV-SL100 rear panel offers 1 optical and 1 coaxial digital audio outputs, mixed 2-channel audio outputs, and composite, S-video and progressive component video output terminals.

### DV-SL100 DVD Player

#### NTSC/PAL Progressive Scanning

Progressive scanning delivers twice the number of scanning lines than the usual interlaced method. This provides higher resolution for a smoother, filmlike image with a high definition TV or a large screen. The DV-SL100 offers progressive scanning of both PAL and NTSC signals.

#### NTSC/PAL Conversion

Now you can play PAL discs on NTSC televisions, or vice-versa! The DV-SL100 will convert one type of signal to the other, when necessary.

#### Versatile Format and Disc Compatibility

The DV-SL100 will play almost any type

of disc you are likely to have:

DVD-Video, DVD+RW/+R, DVD-R/RW, Audio CD, CD-R/RW, SVCD and VCD discs, as well as discs with MP3 and JPEG (multisession) files.

#### View Picture CDs

You can view CDs with pictures, both Picture CD and JPEG types. Convenient functions allow you to zoom, rotate, flip and scan the pictures.

#### MP3 (Multisession) Compatibility

If you enjoy making discs with MP3 files, you'll appreciate the DV-SL100. It provides full MP3 compatibility, including Fast Forward, Rewind and

# CinemaStation



Your sound, your style . . . you're satisfied!



#### Fashionably Slim Styling

Unlike most package home theater systems, DVX-S200P, DVX-S120P, DVR-S200, DVX-S120 and DVR-S120 do not have a low-end, box-like appearance. The design team wanted to make them stylish enough to appeal to anyone who carefully chooses good-looking products for their home or apartment, and they succeeded with a slim, innovative design. Even the speakers are tastefully elegant.

**Quad-Field and Tri-Field CINEMA DSP**  
Tri-Field CINEMA DSP projects three sound fields into the home theater: a Presence sound field in the front and two Surround sound fields in the left rear and right surround, resulting in a powerfully realistic three-dimensional soundscape. And now Yamaha also offers Quad-Field CINEMA DSP via a Phantom mode. It adds an



additional surround center sound field to the Tri-Field system, in order to enjoy the new 6.1-channel formats, Dolby Digital EX and DTS-ES.

#### One-Touch CINEMA DSP Selection

With the DVX-S200P, DVX-S120P, DVR-S200, DVX-S120 and DVR-S120 you can enjoy Yamaha's amazingly realistic CINEMA DSP surround sound, in a choice of 19 programs. Selecting the four most popular programs — Movie, Music, Sports and Game — is quick and easy because the remote control has four buttons clearly marked with icons.

#### Night Listening Mode for All Surround Programs

When you're listening to movies late at night and turn down the volume during loud scenes, dynamic range suffers and you may miss some dialogue and other sounds. By engaging the Night Listening mode, you can reduce the volume and still enjoy proper tonal balance and dynamic range.

#### On-Screen Display and Convenient Controls

A handy On-Screen Display that includes extensive yet easily understandable setup menus makes it easy to select and adjust desired functions.



#### Progressive Scanning

The DVX-S200P, DVX-S120P, DVR-S200, DVX-S120 and DVR-S120 have a progressive scan processor built in and eliminate the jagged edges that generally appear in moving images when interlaced video is converted to progressive.

#### High Performance Speakers and Subwoofer

Speakers are extremely important to the success of a home theater system, and the CinemaStation units are up to the task. The five speakers (two front, two surround and one for the center to handle mainly dialogue) deliver exceptionally high quality surround sound, and have a compact, stylish design. The subwoofer utilizes Yamaha's Advanced YST technology to generate deep, powerful bass from a slim enclosure.



## DVX-S200P DVD Home Theater System



- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- 19 surround programs with SILENT CINEMA and Night Listening mode
- Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for enjoying formats such as Dolby Digital EX and DTS-ES Matrix 6.1

- 100W x 5 digital amplifier
- Progressive Scan DVD player
- 192kHz/24-bit D/A conversion
- Wide disc compatibility such as SA-CD and MP3
- Component video output terminals
- 40-station FM/AM preset tuner
- Remote control with 4 DSP buttons
- Powerful 140W Advanced YST/QD-Bass technology subwoofer

- Quad 2" cone woofers and 1/2" balanced dome tweeter (front speakers)
- Dual 5" full-range drivers (surround speakers)
- 30 Hz to 40 kHz wide range system frequency response
- 4 speaker stands (2 front and 2 surround)



## DVX-S120P DVD Home Theater System



- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- 19 surround programs with SILENT CINEMA and Night Listening mode
- Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for enjoying formats such as Dolby Digital EX and DTS-ES Matrix 6.1

- 55W x 5 digital amplifier
- Progressive Scan DVD player
- 192kHz/24-bit D/A conversion
- Component video output terminal
- 40-station FM/AM preset tuner
- Remote control with 4 DSP buttons
- Powerful 140W Advanced YST / QD-Bass technology subwoofer

- Quad 2" cone woofers and 1/2" balanced dome tweeter (front speakers)
- Dual 5" full-range drivers (surround speakers)
- 30 Hz to 40 kHz wide range system frequency response
- 4 speaker stands (2 front and 2 surround)



The home theater system that makes it easy to enjoy all your favorite entertainment.

Home theater is easier and more elegant than ever.



**SPS-80**  
Optional Speaker  
Stands for  
DVX-S120 and  
NS-P236  
• 12"φ (base),  
26"-36" (height)  
• 4.2 lbs.

## DVX-S120

DVD Home Theater System



- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- 19 surround programs with SILENT CINEMA and Night Listening mode
- Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for enjoying formats such as Dolby Digital EX and DTS-ES Matrix 6.1

- 55W x 5 digital amplifier
- Progressive Scan DVD player
- 192kHz/24-bit D/A conversion
- Component video output terminal
- 40-station FM/AM preset tuner
- Remote control with 4 DSP buttons
- 100W Advanced YST subwoofer

- Dual 5" full-range drivers (4 satellites/center)
- 30 Hz to 25 kHz wide range system frequency response



Home theater breakthrough: slim styling with awesome sound.



## DVR-S200

DVD Home Theater Receiver



- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- 19 surround programs with SILENT CINEMA and Night Listening mode
- Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for enjoying formats such as Dolby Digital EX and DTS-ES Matrix 6.1
- 100W x 5 digital amplifier
- Progressive Scan DVD player
- 192kHz/24-bit D/A conversion
- Wide disc compatibility such as SA-CD and MP3
- Component video output terminals
- 40-station FM/AM preset tuner
- Remote control with 4 DSP buttons



All the power and control you want for maximum home theater enjoyment.



## DVR-S120

DVD Home Theater Receiver



- Powerful 32-bit Yamaha LSI (YSS-938) for CINEMA DSP processing
- 19 surround programs with SILENT CINEMA and Night Listening mode
- Dolby Digital, DTS and Dolby Pro Logic II
- Quad-Field CINEMA DSP for enjoying formats such as Dolby Digital EX and DTS-ES Matrix 6.1
- 55W x 5 digital amplifier
- Progressive Scan DVD player
- 192kHz/24-bit D/A conversion
- Component video output terminal
- 40-station FM/AM preset tuner
- Remote control with 4 DSP buttons



## Digital Home Theater Component Surround Programs

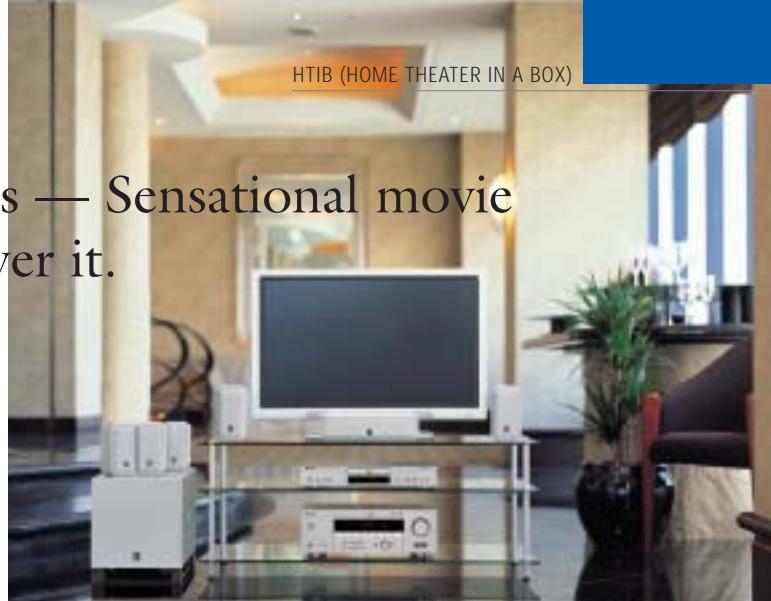
	RX-Z9	RX-V2400	RX-V1400	RX-V750	RX-V650	RX-V550	RX-V450	RX-SL100	DVR-S200	DVR-S120
<b>HiFi DSP Programs</b>										
CONCERT HALL 1	Munich A	●	● (Concert Hall 1)						● (Classic Hall )	● (Classic Hall )
	Frankfurt	●								
	Stuttgart	●								
	Munich B	●								
	Vienna	●	● (Concert Hall 2)	● (Concert Hall )						
	Amsterdam	●								
CONCERT HALL 2	Hall G in U.S.A	●								
	Hall H in USA	●								
	Live Concert	●		●	●	●	●	●	●	●
CHURCH	Tokyo	●								
	Freiburg	●	●							
	Royaumont	●								
JAZZ CLUB	Village Gate	●								
	Village Vanguard	●								
ROCK CONCERT	The Bottom Line	●	●	●	●	●	●	●	●	●
	The Roxy Theatre	●	●	●	●	●	●	●	●	●
	Warehouse Loft	●								
ENTERTAINMENT	Arena	●								
	Disco	●	●	●	●	●	●	●	●	●
9-CH STEREO	Party	●								
	9 Ch Stereo	●	● (7ch Stereo)	● (7ch Stereo)	● (7ch Stereo)	● (7ch Stereo)	● (6ch Stereo)	● (6ch Stereo)	● (5ch Stereo)	● (5ch Stereo)
<b>HiFi DSP Subtotal</b>	<b>21</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>
<b>CINEMA DSP Programs</b>										
ENTERTAINMENT	Game	●	●	●	●	●	●	●	●	●
TV THEATER	TV Sports	●	● (Variety/Sports)	● (Live Sports)						
MUSIC VIDEO	Mono Movie	●	●	●	●	●	●	●	●	●
	Pop/Rock	●	●	●	●	●	●	●	●	● (Music Video)
	DJ	●								
	Classical/Opera	●								
MOVIE THEATER 1	Pavilion	●								
	Spectacle	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]
MOVIE THEATER 2	Sci-Fi	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]
	Adventure	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Action) [5]	● (Action) [5]
	General	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Drama) [5]	● (Drama) [5]
ENHANCED	Enhanced	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● [5]	● (Theater) [5]	● (Theater) [5]
<b>CINEMA DSP Subtotal</b>	<b>12 [32]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>9 [29]</b>	<b>8 [28]</b>	<b>8 [28]</b>
<b>Decoder Straight Programs</b>										
Dolby Digital	●	●	●	●	●	●	●	●	●	●
Dolby Digital EX	●	●	●	●	●	●	●	●	● (Phantom)	● (Phantom)
DTS Digital Surround	●	●	●	●	●	●	●	●		
DTS 96/24	●	●	●	●	●	●	●	●		
DTS-ES Matrix 6.1	●	●	●	●	●	●	●	●	● (Phantom)	● (Phantom)
DTS 96/24 ES (6.1)	●									
DTS-ES Discrete 6.1	●	●	●	●	●	●	●	●		
Dolby Pro Logic	●	●	●	●	●	●	●	●	●	●
Dolby Pro Logic II Music	●	●	●	●	●	●	●	●	●	●
Dolby Pro Logic II Movie	●	●	●	●	●	●	●	●	●	●
Dolby Pro Logic II Game	●	●	●	●	●	●	●	●	●	●
Dolby Pro Logic IIX Music	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	●**	●**
Dolby Pro Logic IIX Movie	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]*	● [3]**	● [3]**	●**	●**
Dolby Pro Logic IIX Game	●	●**	●**	●**	●**	●**	●**	●**	●**	●**
DTS Neo:6 Music	●	●	●	●	●	●	●	●	●	●
DTS Neo:6 Cinema	●	●	●	●	●	●	●	●	●	●
<b>Decoder Straight Subtotal</b>	<b>16 [20]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [19]</b>	<b>15 [17]</b>	<b>15 [17]</b>	<b>15 [17]</b>	<b>14</b>	<b>7</b>
<b>THX Programs</b>										
Cinema	●	●	●							
Ultra 2 Cinema	●									
Music	●									
ES Matrix 6.1	●									
ES Discrete 6.1	●									
Surround EX	●	●	●							
<b>Surround Format Subtotal</b>	<b>6</b>	<b>2</b>	<b>2</b>							
<b>Program Total</b>	<b>55 [79]</b>	<b>33 [57]</b>	<b>31 [55]</b>	<b>29 [53]</b>	<b>29 [53]</b>	<b>29 [51]</b>	<b>29 [51]</b>	<b>28 [48]</b>	<b>19 [39]</b>	<b>19 [39]</b>

●: A/V Programs    ●: HiFi DSP Programs    ●: CINEMA DSP    ●: Tri-Field CINEMA DSP Capable    ●: Quad-Field CINEMA DSP Capable    [ ]: Variations

\* Only when using Surround Back x 2 Speakers for normal, Dolby Digital and DTS. \*\* Only for Dolby Pro Logic (normal)

# Digital Home Theater Packages — Sensational movie sound as only Yamaha can deliver it.

You'll be amazed at how much more fun watching movies is with realistic and dynamic surround sound. Yamaha receivers feature the CINEMA DSP system for perfectly realized theater sound. The subwoofers use QD-Bass technology and the Advanced YST system for extra bass power. The speakers are extremely high quality AND conveniently compact. Best of all, the receivers and speakers are "fine-tuned" to sound their best together.



## DTX-5000 Digital Home Theater 6.1-Channel Package

**DIGITAL** To PART | **CINEMA DSP** DIGITAL | **SILENT** CINEMA | **DOLBY** DIGITAL EX | **DTS** 96/24 | **DVD** AUDIO VIDEO | **YST** | **QD-Bass** | **Preset**

- DVD-Audio/SA-CD Playback
- DCDi Progressive Scanning with 3:2 Pull-Down
- 6.1ch Powerful Surround Sound (105W x 6)
- DTS 96/24, Dolby Digital EX, Dolby Pro Logic IIx
- S-Video Up Conversion
- Front A/V Input
- Flat Designed Speaker System to Match Plasma Monitors
- Quad 4" Woofers & 1" Tweeter — 3-Way Speaker System
- Aluminum Extruded Front Speaker Stand Included



## DTX-3000 Digital Home Theater 6.1-Channel Package

**DIGITAL** To PART | **CINEMA DSP** DIGITAL | **SILENT** CINEMA | **DOLBY** DIGITAL EX | **DTS** 96/24 | **DVD** VIDEO | **PUSH+CHANGE** | **YST** | **QD-Bass** | **Preset**

- 5-Disc Progressive Scan DVD Changer
- 6.1ch Powerful Surround Sound (100W x 6)
- DTS 96/24, Dolby Digital EX, Dolby Pro Logic IIx
- Component Video Input
- Adjustable Subwoofer Crossover
- Front A/V Input
- Direct Stereo Mode
- 2.5" Dual Woofers & 1/2" Tweeter for All Channels
- Floor Standing Speaker System for All Channels (except center speaker)



## DTX-1000 Digital Home Theater 6.1-Channel Package

**DIGITAL** To PART | **CINEMA DSP** DIGITAL | **SILENT** CINEMA | **DOLBY** DIGITAL EX | **DTS** 96/24 | **DVD** VIDEO | **YST** | **QD-Bass** | **Preset**

- Progressive Scan Single DVD Player
- 6.1ch Powerful Surround Sound (100W x 6)
- DTS 96/24, Dolby Digital EX, Dolby Pro Logic IIx
- Component Video Input
- Direct Stereo Mode
- Adjustable Subwoofer Crossover
- 2-Way Speaker System with Removable Grille
- Silver Glossy Finish Cabinet

**NS-AP9500**  
Digital Home Theater  
6.1-Channel Speaker Package



Total 730W  
6.1ch System

**DV-SL100**  
Progressive Scan DVD Player  
**RX-SL100**  
6-Channel Digital Home Theater Receiver

## YHT-F1500 Digital Home Theater 6.1-Channel Package

**CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **DTS** **DVD VIDEO** **DCD** **Advanced YST** **QD-Bass** **Preset**

- Progressive Scan Single DVD Player (New Slim Design)
- Yamaha Original Digital Amplification
- 6.1ch Powerful Surround Sound (100W x 6)
- GUI On-Screen Display
- Front Digital Input
- Flat Designed Speaker System to Match Plasma Monitors
- Quad 4" Woofers & 1" Tweeter — 3-Way Speaker System
- Aluminum Extruded Front Speaker Stand Included



Total 600W  
5.1ch System

**YST-SW030**  
Advanced YST and  
QD-Bass Technology  
Subwoofer with 130 W



Total 730W  
6.1ch System

**NS-AP3500**  
Digital Home Theater 6-  
Channel Speaker Package

**DV-C6660**  
Progressive Scan DVD-Video  
5-Disc Changer

**HTR-5740**  
6-Channel Digital Home  
Theater Receiver

## YHT-750 Digital Home Theater 6.1-Channel Package

**DIGITAL Top-Art** **CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **DTS** **DVD VIDEO** **PLAY > CHANGE** **Advanced YST** **QD-Bass** **Preset**

- 5-Disc Progressive Scan DVD Changer
- 6.1ch Powerful Surround Sound (100W x 6)
- DTS 96/24, Dolby Digital EX, Dolby Pro Logic IIx
- Component Video Input
- Direct Stereo Mode
- Adjustable Subwoofer Crossover
- 2-Way Speaker System with Removable Grille
- Silver Gloss Finish Cabinet



**NS-AP4400**  
Digital Home Theater 6-  
Channel Piano Finished  
Speaker Package

Total 720W  
6.1ch System

**YST-SW015**  
Advanced YST and QD-Bass  
Technology Subwoofer with 120 W

**HTR-5740**  
6-Channel Digital Home  
Theater Receiver

## YHT-550 Digital Home Theater 5.1-Channel Package

**CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **DTS** **DVD VIDEO** **Advanced YST** **QD-Bass** **Preset**

- Progressive Scan Single DVD Player
- 5.1ch Powerful Surround Sound (100W x 5)
- DTS-ES, Dolby Digital and Dolby Pro Logic II Decoding
- Preset Remote Control
- Speaker A or B Selection
- 5.1-Channel External Input for DVD-Audio & SA-CD
- 192 kHz/24-Bit DACs for All Channels
- 2-Way Speaker System with Removable Grille
- Silver Gloss Finish Cabinet

**YST-SW010**  
Advanced YST and QD-Bass Subwoofer with 100 W

**NS-AP1500**  
Digital Home Theater 5-Channel Speaker Package

Total 600W  
5.1ch System



**HTR-5730**  
5-Channel Digital Home Theater Receiver

## YHT-450 Digital Home Theater 6.1-Channel Package

**DIGITAL Top-Art** **CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **DTS** **DVD VIDEO** **Advanced YST** **QD-Bass** **Preset**

- 6.1ch Powerful Surround Sound (100W x 6)
- All Piano Finish Wooden Speaker System
- DTS 96/24, Dolby Digital EX, Dolby Pro Logic IIx
- Front A/V Input Input
- Direct Stereo Mode
- Adjustable Subwoofer X-Over
- 3-Way Front Speaker System (6-1/2" Woofer)
- 2-Way Center & Surround Speakers
- Component Video Input

## YHT-150 Digital Home Theater 5.1-Channel Package

**CINEMA DSP DIGITAL** **SILENT CINEMA** **DOLBY DIGITAL EX** **DTS** **DVD VIDEO** **Advanced YST** **QD-Bass** **Preset**

- 5.1ch Powerful Surround Sound (100W x 5)
- DTS-ES, Dolby Digital and Dolby Pro Logic II Decoding
- Preset Remote Control
- Speaker A or B Selection
- 5.1ch External Input for DVD-Audio and SA-CD
- 192 kHz/24-Bit D/A Converters for All Channels
- 3 Digital Inputs
- 21 Surround Programs
- 5-Band Center Graphic Equalizer
- 6.5" 100W New Cube Type High Power Subwoofer

	DTX-5000	DTX-3000	DTX-1000	YHT-F1500	YHT-750	YHT-550	YHT-450	YHT-150
Channels	6.1	6.1	6.1	6.1	6.1	5.1	6.1	5.1
RMS Output Power	105W x 6	100W x 6	100W x 6	100W x 6	100W x 6	100W x 5	100W x 6	100W x 5
Yamaha Original Digital Amplification				■				
5 Disc DVD Player		■			■			
Single Disc DVD Player	■			■	■		■	
DVD-Audio / SA-CD Playback	■							
Dolby Pro Logic IIx / DTS 96/24	■	■	■	■	■		■	
Surround Program (Variations)	29 (51)	29 (51)	29 (51)	28 (48)	29 (51)	21 (41)	29 (51)	21 (41)
S-Video Up Conversion	■							
Digital Inputs (Optical / Coaxial)	3 / 1	2 / 1	2 / 1	3 / 1	2 / 1	2 / 1	2 / 1	2 / 1
Front Panel Digital Input				■				
Front Panel A/V Input	■	■	■	■	■		■	
Component Video Inputs	2	2	2		2			2
S-Video Inputs	3							
Speaker A/B, or A+B Selection	■	■	■		■	Speaker A or B	■	Speaker A or B
Front Speakers (Woofer) (Mid-Range)	Quad 4"	Dual 2.5"	2.5"	Quad 4"	2.5"	2.5"	6.5"	2.5" Full-Range
(Tweeter)	3/4" Soft Dome	1/2" Dome	1/2" Dome	3/4" Soft Dome	1/2" Dome	1/2" Dome	1" Soft Dome	
Center Speaker (Woofer) (Tweeter)	Quad 4"	Dual 2.5"	Dual 2.5"	Quad 4"	Dual 2.5"	Dual 2.5"	Dual 4"	2.5" Full-Range
Surround Speakers (Woofer) (Tweeter)	Quad 4"	Dual 2.5"	2.5"	Quad 4"	2.5"	2.5"	4"	2.5" Full-Range
Subwoofer Output Power	130W	130W	100W	130W	130W	100W	120W	100W
Subwoofer Driver	8"	8"	6.5"	8"	8"	6.5"	6.5"	6.5"

## Digital Home Theater Receivers



	HTR-5790	HTR-5760	HTR-5750	HTR-5740	HTR-5730	HTR-5630
Product Color	Black	Black	Silver	Black	Silver	Black/Silver
Channels	7	7	6	6	5	5
RMS Power (8 ohms, 20 Hz–20 kHz)	140 W x 7	110 W x 7	105 W x 6	100 W x 6	100 W x 5 (6 ohms)	70 W x 5 (6 ohms)
Digital ToP-ART	■	■	■	■		
High Current Amplification	■	■	■	■		
Dolby Digital EX/DTS-ES	Full Decode	Full Decode	Full Decode	Full Decode	Matrix 6.1	Matrix 6.1
Dolby Pro Logic IIx / DTS 96/24	■	■	■	■		
DTS Neo:6	■	■	■	■		
D/A Converters	192kHz/24-bit	192kHz/24-bit	192kHz/24-bit	192kHz/24-bit	192kHz/24-bit	96kHz/24-bit
Selectable Subwoofer Crossover	9-step	9-step	9-step	9-step		
Subwoofer Phase Select	■	■	■	■		
Audio Delay	(0–240 ms)	(0–160 ms)	(0–160 ms)	(0–160 ms)		
YPAO with Optimizer Microphone	■	■				
Surround Program	31 (55 variations)	29 (53 variations)	29 (51 variations)	29 (51 variations)	21 (41 variations)	21 (41 variations)
SILENT CINEMA	■	■	■	■	■	■
Night Listening Enhancer	Night Listening Mode		■	■	Night Listening Mode	Night Listening Mode
Speaker Terminals	9ch	9ch	6ch	6ch	5ch	5ch
Dialogue Lift	■	■				
Multi-Channel External Decoder Input	6ch (8ch compatible)	8ch	6ch	6ch	6ch	
Preamplifier Terminals	7 (2F/C/2S/2SB)	7 (2F/C/2S/2SB)				
Component Video Up Conversion	■					
S-Video Up Conversion	■	■	■			
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 17 <sup>1</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>3</sup> / <sub>16</sub> " x 13"	17 <sup>1</sup> / <sub>8</sub> " x 5 <sup>7</sup> / <sub>8</sub> " x 12 <sup>11</sup> / <sub>16</sub> "
Weight	34.2 lbs.	27.6 lbs.	24.2 lbs.	24.2 lbs.	14.1 lbs.	17.6 lbs.

## DVD Players



	DV-S5770	DV-S5650
Progressive Scan	■	■
Disc Playback Compatibility	SA-CD, DVD-Audio/Video, DVD+RW/+R, DVD-RW/-R, SVCD, VCD, Audio CD and, CD-R/RW	DVD-Video, DVD+RW/+R, DVD-R/-RW, SVCD, VCD, Picture CD, JPEG, Audio CD and CD-R/RW
CD Upsampling	■	
Audio Direct Mode	■	
DDCI Processing	■	
On-Screen-Display	With GUI	■
MP3 Playback Compatibility	Multisession	Multisession
Video D/A Converter	108 MHz/12-bit	54 MHz/12-bit
Audio D/A Converter	192 kHz/24-bit	96 kHz/24-bit
Signal-to-Noise Ratio (CD)	115 dB	105 dB
Frequency Response (CD/VCD)	2 Hz-20 kHz	2 Hz-20 kHz
(DVD 96 kHz sampling)	2 Hz-44 kHz	2 Hz-44 kHz
Dynamic Range (DVD 48 kHz, 24 Bit)	107 dB (SA-CD)	100 dB
Harmonic Distortion + Noise (1 kHz)	0.0017% (SA-CD)	0.003%
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>3</sup> / <sub>16</sub> " x 12 <sup>11</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>15</sup> / <sub>16</sub> " x 11 <sup>7</sup> / <sub>8</sub> "
Weight	7.1 lbs.	6.2 lbs.

## 2-in-1 design plays DVD-Audio and Super Audio CD discs.

If you're looking for a high quality DVD player that can also handle both DVD-Audio and SA-CD discs, the DVD-S2300MK2 is an ideal choice. Designed first and foremost to deliver outstanding audio and video quality, this player will be the focal point of an impressive home theater system.



### DVD-S2300MK2 DVD Player



#### DVD-Audio/Super Audio CD Playback

DVD-Audio and Super Audio CD are new audio formats that offer stereo and multi-channel (surround) sound with higher quality and greater sonic realism than ordinary CDs. They can also provide extra content like artist information and lyrics. With the DVD-S2300MK2, you don't have to choose between them — this player will play both.

#### Progressive Scanning with DCDI Processing

Video displays use two types of scanning systems: interlaced and progressive. In brief, progressive scans twice as fast as interlaced, providing a superior picture with less flicker

and other distortion. The DVD-S2300MK2 has a progressive scan processor built in, so progressive video images can be viewed on a digital TV or monitor. It also offers DCDI, a processing technique that eliminates jagged edges.

#### Exceptionally Good Sound Quality

The DVD-S2300MK2 uses high performance Super Audio CD DACs for all channels and a 192kHz/24-bit audio DAC. The Super Audio CD and DVD-Audio circuits are completely independent and optimized for each format. An Video Off mode can be selected to ensure that no interference from the video circuitry can affect the sound.

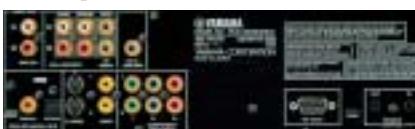
#### Bass Management

The DVD-S2300MK2 provides Bass Management processing and a subwoofer/bass management output terminal. Bass management is important for DVD-Audio and Super Audio CD multi-channel playback, as it properly routes the bass frequencies for best performance from a multi-speaker home theater system. With normal 2-channel (stereo) CDs, the bass frequencies are routed to the subwoofer, so you can enjoy "2.1" channel sound with more powerful bass.



#### Other Notable Features

- Multi-bit Delta Sigma DAC
- CD-R/RW\*, \*\*, \*\*\* and MP3 file compatibility
- Large disc stabilizer
- Inlet-type power cable
- Gold-plated terminals



The DVD-S2300MK2 rear panel offers optical and coaxial digital audio, 5.1-channel audio and mixed 2-channel audio output, progressive component video, S-Video and composite video output terminals, and Bass Management terminal. It also provides an RC-232C interface and remote control in/out (extended IR code) for custom installation.

## Enjoy all your favorite discs at maximum quality.

Yamaha combines high quality video and audio reproduction with wide disc compatibility and exceptional convenience. This DVD player will keep you satisfied for years to come.



### DVD-S1500 DVD Player



#### DVD-Audio/SA-CD Playback

The DVD-S1500 is compatible with both DVD-Audio and SA-CD. These multi-channel music formats provide a surround sound music experience that is much more natural and lifelike than normal stereo.

#### Exceptionally Good Sound Quality

The DVD-S1500 delivers sound quality that is superior even to some more expensive players for a number of reasons. It uses high performance 192kHz/24-bit audio DACs

for all channels. An Audio Direct mode can be selected to ensure that no interference from the video circuitry will affect the sound. This player even has independent digital and analog power circuits.

#### CD Upsampling

CD Upsampling raises the CD sampling rate, for a smoother sound. It enables CD playback to approach the quality of DVD-Audio. Once CD Upsampling is selected, it is automatically engaged whenever a CD is played.

#### Other Notable Features

- On-Screen Display with GUI (Graphical User Interface)
- NTSC/PAL Progressive Scanning
- NTSC/PAL Conversion
- 108MHz/12-Bit Video DAC
- MP3 Forward, Rewind, Repeat and Shuffle Play
- Gold-Plated Terminals for All Pin Jacks
- Optical and Coaxial Digital Outputs
- Aluminum Front Panel
- DVD-Video, SVCD, VCD, JPEG (multisession), Audio CD and MP3 (multisession) Playback
- DVD+RW/+R\*, DVD-R/-RW\* and CD-R/RW\*, \*\*, \*\*\* Playback
- Multiple Zoom
- Resume (5-Disc Memory) Play
- Program and Shuffle Play
- Disc Lock Function



The DVD-S1500 rear panel offers optical and coaxial digital audio output, mixed 2-channel audio output, and composite, S-video and component video output (progressive and interlace) terminals. Also provides terminal for detachable power cable.

## Maximize your home theater enjoyment with DVD-Video and SA-CD.

The DVD-C940 is compatible with a wide range of disc types, both video and audio, including the Super Audio CD format. It uses a number of the most advanced video technologies to deliver extremely high image quality, and it gives you the convenience of 5-disc loading, with Yamaha's exclusive PlayXchange.



### DVD-C940 DVD Changer



#### Super Audio CD Playback

Super Audio CD is a new audio format that offers even higher sound quality than ordinary CDs. It is capable of reproducing frequencies up to about 100kHz, compared with 20kHz for CDs. Although frequencies above 20kHz are inaudible, the higher harmonics result in a more natural sound. The DVD-C940 has an exclusive Super Audio CD decoder to ensure highest quality as well as Bass Management Processing for proper bass routing, and multi-channel compatibility with multi-channel/stereo switching for playback.

#### Progressive Scan Video Output

The DVD-C940 has an amazing array of video technology that makes it a great value. It uses a 108MHz/10-bit video DAC that provides significantly better performance than the usual 8-bit type. It also offers the most advanced video technology from Faroudja, including TrueLife Bandwidth Expansion, Cross Color Suppression, Aspect Ratio Conversion, Motion Adaptive Noise Reduction and DCDI Processing that eliminates the jagged edges that can appear in moving images.

#### Multi-Disc-Format Program/Random Play

It is possible to load a variety of disc types and enjoy both Program Play and Random Play

from all of them. Discs are Super Audio CD, DVD-Video, SVCD, DVD+RW/+R\*, DVD-R/-RW\* and CD-R/RW\*,\*\*,\*\*\* including MP3.

#### Intelligent Playback

The DVD-C940 offers Music and Movie modes. When you select Music mode, only music discs will be played back during Program and Random Play, and in Movie mode, only movie discs.

#### Other Notable Features

- Yamaha PlayXchange
- Super Audio CD, CD and MP3 Text Display
- Zoom Function
- On-Screen Menu Icons
- Large Disc Stabilizer



The DVD-C940 rear panel offers optical and coaxial digital audio output, 5.1-channel and 2-channel audio output, and composite, S-video, component video (interlace, 480i) and progressive component video (480p) output terminals. It also provides RC-232C interface and remote control in/out (extended IR code) for custom installation.

## Non-stop home theater enjoyment from five discs loaded at once.

This high performance DVD player lets you load five discs and enjoy uninterrupted music even when you want to change discs, thanks to PlayXchange. Both video and audio quality are outstanding, and there are a wide range of convenient functions.



### DVD-C740 DVD Changer



#### Progressive Scan Video Output

The DVD-C740 uses a Progressive Circuit to convert the 24-frame per second DVD-Video\* images to the TV field rate of 60 fields per second. In addition, Progressive Video Output ensures that the progressive "flags" on the disc are properly handled and a 4:4:4 Progressive Component Video circuit provides high-quality reproduction of YPbPr signals.

computers or digital recorders to make their own CD-R/RW\*,\*\*,\*\*\* discs. The DVD-C740 is capable of playing these discs, in addition to normal CDs, VCDs and of course DVDs. Listening possibilities are further expanded to include MP3 tracks that have been burned onto CD-R/RW discs.

#### MP3 (Multisession) Playback

The DVD-C740 plays MP3 tracks from CD-R or CD-RW discs which can hold about 12 hours of MP3 music.

#### Versatile Disc Playback Compatibility

More and more people these days are using their

#### Yamaha PlayXchange

The DVD-C740 gives you the benefits of extended playing time and direct selection from all discs. And with PlayXchange, you can change discs while the current one continues to play. You don't have to interrupt the movie or music to change a disc and you're not limited to changing only one disc at a time.

#### Other Notable Features

- CD Text Display
- Resume (5-Disc Memory) Play
- TruSurround 3D Sound for Analog Out
- Screen Saver (75% Dimmer)



The DVD-C740 rear panel offers optical and coaxial digital audio outputs, mixed 2-channel audio outputs, and composite, S-video and progressive component video (480p) output terminals. It also provides a subwoofer output terminal.

# The ideal DVD player for those who want high quality plus convenience

DVD player for high quality video and audio home theater enjoyment, featuring compatibility with a wide range of discs and AV formats including MP3, NTSC/PAL progressive scanning, NTSC/PAL conversion, Picture CD playback, high quality video DAC, Multiple Zoom and easy operation.



## DVD-S540 DVD Player



### NTSC/PAL Progressive Scanning

Progressive scanning delivers twice the number of scanning lines than the usual interlaced method. This provides higher resolution for a smoother, filmlike image with a high definition TV or a large screen. The DVD-S540 offers progressive scanning of both PAL and NTSC signals, and will convert PAL to NTSC and vice-versa.

### NTSC/PAL Conversion

Now you can play PAL discs on NTSC televisions, or vice-versa! The DVD-S540

will convert one type of signal to the other, when necessary.

### Versatile Format and Disc Compatibility

The DVD-S540 will play almost any type of disc you are likely to have: DVD-Video\*, DVD+R/+RW\*, DVD-R/RW\*, Audio CD, CD-R/RW\*, \*\*, \*\*\*, SVCD and VCD discs, as well as discs with MP3 and JPEG files (multisession).

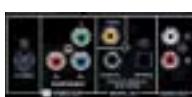
### View Picture CDs

You can view CDs with pictures, both

Picture CD and JPEG types. Convenient functions allow you to zoom, rotate, flip and scan the pictures.

### Other Notable Features

- 54MHz/12-bit video D/A conversion
- MP3 navigation display
- MP3 fast forward, rewind and special playback
- JPEG/MP3 mixedture disc playback compatibility
- Screen saver
- Still picture
- Multiple repeat play: Chapter/Title/All, or Track/All and A-B



The DVD-S540 rear panel offers optical and coaxial digital audio output, dual mixed 2-channel audio output, and composite video, S-video and component video output terminals.

- \* Only compatible with discs that have been finalized when recording is completed. Some discs may not play due to disc characteristics or recording conditions.
- \*\* Only compatible with discs that have been recorded in CD-DA format or Video CD format and Super Video CD format.
- \*\*\* Some MP3 or JPEG discs may not play due to disc characteristics or recording conditions.

# DVD recording provides too many advantages for you to ignore!

The DRX-2 is Yamaha's second-generation DVD Recorder, featuring superb video and audio quality with a wide range of convenient functions. It offers all of the advantages of the +RW format, and provides six recording modes, including the world's first two-hour Linear PCM audio recording mode capable of recording DVD+RW and DVD+R discs. It can also play back all types of DVDs and CDs.



## DRX-2 DVD Recorder



### Linear PCM Audio Recording

Linear PCM audio recording is a superior recording method whereby the data is not compressed. Generally available in one-hour mode, the DRX-2 also provides a two-hour mode, the first in the industry to do so.

### Progressive Scan Output

Progressive scanning doubles the number of scan lines compared to normal interlaced scanning when creating a picture. Displayed on a TV or monitor with progressive scan capabilities, these pictures have a smoother, more filmlike quality.

### Fit to Space Recording

Depending on the space remaining on the disc, the DRX-2 will automatically select the highest quality recording mode to fit in the program.

### Index Picture Screen

After one or more recordings have been made, the on-screen display shows small Index Pictures — selected scenes from each segment that has been recorded. The source, length, date, time and recording mode are also displayed. This gives you a handy overview of the entire contents of the disc.

### iLINK Digital Video Input

The DRX-2 has an iLINK terminal on the front panel for connecting a digital camcorder. You can edit your home videos and store them on highly durable DVD discs. At the highest quality recording mode, there is no difference between the original source and the recording.



### Other Notable Features

- 6 recording modes: 1 and 2 hours (Linear PCM), 2.5, 3, 4 and 6 hours (Dolby Digital)
- Instant use: no disc formatting necessary; instant eject: no finalization necessary with DVD+RW discs
- Easy to create and modify playlists
- Auto and Manual Chapter Marker Insertion
- Chapter Hide for skipping commercials
- VCR Plus+ timer recording



The DRX-2 rear panel offers optical and coaxial digital audio output, component video with audio output, S-Video and composite video with audio output terminals, component video with audio input, S-Video and composite video with audio input terminals, and inlet-type power terminal

Digital Home Theater Receivers	RX-Z9	RX-V2400	RX-V1400		
<b>Audio Section</b>					
Min. RMS Output Power (8 ohms, 20 Hz-20 kHz)					
Front Channels [THD]	170 W + 170 W [0.015%]	120 W + 120 W [0.04%]	110 W + 110 W [0.04%]		
Center Channel [THD]	170 W [0.015%]	120 W [0.04%]	110 W [0.04%]		
Surround Channels [THD]	170 W + 170 W [0.015%]	120 W + 120 W [0.04%]	110 W + 110 W [0.04%]		
Surround Back Channels [THD]	170 W + 170 W [0.015%]	120 W + 120 W [0.04%]	110 W + 110 W [0.04%]		
Presence Channels [THD] (1 kHz)	50 W + 50 W [0.05%]				
High Dynamic Power & Low Impedance Drive Capability	Yes	Yes	Yes		
Dynamic Power/Ch (Front Ch, 8/6/4/2 ohms)	210/260/340/580 W	155/195/250/330 W	145/185/240/320 W		
Linear Damping [Damping Factor (8 ohms, 20 Hz-20 kHz)]	200 (front/center)	140 (front, speaker A)	140 (front, speaker A)		
Frequency Response (CD)	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB	10 Hz-100 kHz +0, -3 dB		
Total Harmonic Distortion (20 Hz-20 kHz, CD)	0.005% (85 W/8 ohms)	0.04% (60 W/8 ohms)	0.04% (60 W/8 ohms)		
Signal-to-Noise Ratio (IHF-A-Network, CD)	100 dB (250 mV)	100 dB (250 mV)	100 dB (250 mV)		
<b>Video Section</b>					
Component Video Up Conversion	Yes	Yes	Yes		
HDTV Compatible Component Video Out	Yes	Yes	Yes		
Monitor Out Frequency Response (Component Video)	5 Hz-100 MHz -3 dB	5 Hz-60 MHz -3 dB	5 Hz-60 MHz -3 dB		
<b>General Section</b>					
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 8 <sup>5</sup> / <sub>16</sub> " x 18 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 17 <sup>1</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 17 <sup>1</sup> / <sub>16</sub> "		
Weight	66.1 lbs.	34.2 lbs.	34.2 lbs.		

Digital Home Theater Receivers	RX-V750	RX-V650	RX-V550	RX-V450	RX-SL100
<b>Audio Section</b>					
Min. RMS Power (8 ohms, 20 Hz-20 kHz, 0.06% THD)					
Front Channels	100 W + 100 W	95 W + 95 W	90 W + 90 W	85 W + 85 W	(6 ohms, 1 kHz, 10% THD)
Center Channel	100 W	95 W	90 W	85 W	100 W
Surround Channels	100 W + 100 W	95 W + 95 W	90 W + 90 W	85 W + 85 W	100 W + 100 W
Surround Back Channels	100 W + 100 W	95 W + 95 W	90 W	85 W	100 W
High Dynamic Power & Low Impedance Drive Capability	Yes	Yes	Yes	Yes	
Dynamic Power/Ch (Front Ch, 8/6/4/2 ohms)	135/170/200/245 W	130/165/195/240 W	120/155/190/235 W	115/150/185/230 W	
Linear Damping [Damping Factor (8 ohms, 20 Hz-20 kHz)]	100 (front, speaker A)				
Frequency Response (CD)	10 Hz-100 kHz +0, -3 dB	20 Hz-50 kHz +0, -3 dB			
Total Harmonic Distortion (20 Hz-20 kHz, CD)	0.06% (50 W/8 ohms)	0.06% (50 W/8 ohms)	0.06% (40 W/8 ohms)	0.06% (40 W/8 ohms)	0.04% (35 W/6 ohms)
Signal-to-Noise Ratio (IHF-A-Network, CD)	100 dB (250 mV)	96 dB (250 mV)			
<b>Video Section</b>					
Component Video Up Conversion	Yes				
S-Video Up Conversion	Yes	Yes	Yes		
HDTV Compatible Component Video Out	Yes	Yes	Yes	Yes	
Monitor Out Frequency Response (Component Video)	5 Hz-60 MHz -3 dB				
<b>Tuner Section</b>					
FM 50 dB Quieting Sensitivity (IHF, 75 ohms, Mono/Stereo)	2 $\mu$ V (17.3 dBf)/25 $\mu$ V (39.2 dBf)	2 $\mu$ V (17.3 dBf)/25 $\mu$ V (39.2 dBf)	2 $\mu$ V (17.3 dBf)/25 $\mu$ V (39.2 dBf)	2 $\mu$ V (17.3 dBf)/25 $\mu$ V (39.2 dBf)	2.8 $\mu$ V (17.3 dBf) [Mono]
FM Signal-to-Noise Ratio (Mono/Stereo)	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB	76 dB/70 dB
<b>General Section</b>					
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6 <sup>3</sup> / <sub>4</sub> " x 16 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>3</sup> / <sub>16</sub> " x 13"
Weight	27.6 lbs.	27.6 lbs.	24.2 lbs.	24.2 lbs.	14.1 lbs.

CinemaStation	DVX-S200P	DVR-S200	DVX-S120P	DVX-S120	DVR-S120
<b>Receiver Section</b>					
Maximum Power (front/center/surround + subwoofer)	100 W x 5 + 140 W	100 W x 5 + 140 W	55 W x 5 + 100 W	55 W x 5 + 100 W	55 W x 5 + 100 W
<b>DVD Player Section</b>					
Frequency Response (CD)	10 Hz-20 kHz	10 Hz-20 kHz	10 Hz-20 kHz	10 Hz-20 kHz	10 Hz-20 kHz
(DVD 48 kHz sampling)	10 Hz-22 kHz	10 Hz-22 kHz	10 Hz-22 kHz	10 Hz-22 kHz	10 Hz-22 kHz
(DVD 96 kHz sampling)	10 Hz-44 kHz	10 Hz-44 kHz	10 Hz-44 kHz	10 Hz-44 kHz	10 Hz-44 kHz
(DVD-Audio 192 kHz sampling)	10 Hz-88 kHz	10 Hz-88 kHz			
Center Unit Dimensions (W x H x D)	14 <sup>3</sup> / <sub>16</sub> " x 3 <sup>1</sup> / <sub>8</sub> " x 14 <sup>3</sup> / <sub>16</sub> "	14 <sup>3</sup> / <sub>16</sub> " x 3 <sup>1</sup> / <sub>8</sub> " x 14 <sup>3</sup> / <sub>16</sub> "	14 <sup>3</sup> / <sub>16</sub> " x 2 <sup>15</sup> / <sub>16</sub> " x 14 <sup>3</sup> / <sub>16</sub> "	14 <sup>3</sup> / <sub>16</sub> " x 2 <sup>15</sup> / <sub>16</sub> " x 14 <sup>3</sup> / <sub>16</sub> "	14 <sup>3</sup> / <sub>16</sub> " x 2 <sup>15</sup> / <sub>16</sub> " x 14 <sup>3</sup> / <sub>16</sub> "
Weight	14.3 lbs.	14.3 lbs.	13.2 lbs.	13.2 lbs.	13.2 lbs.
<b>Speaker Section</b>					
Magnetic Shielding	All speakers		All speakers	All speakers	
System Frequency Response	30 Hz-40 kHz		30 Hz-40 kHz	30 Hz-25 kHz	
[4 Satellites] Dimensions (W x H x D)	2 <sup>3</sup> / <sub>4</sub> " x 18 <sup>7</sup> / <sub>8</sub> " x 2 <sup>1</sup> / <sub>8</sub> "		2 <sup>3</sup> / <sub>4</sub> " x 18 <sup>7</sup> / <sub>8</sub> " x 2 <sup>1</sup> / <sub>8</sub> "	2 <sup>13</sup> / <sub>16</sub> " x 6 <sup>11</sup> / <sub>16</sub> " x 4 <sup>1</sup> / <sub>4</sub> "	
Weight	3.5 lbs.		3.5 lbs.	2 lbs.	
[Center Speaker] Dimensions (W x H x D)	18 <sup>7</sup> / <sub>8</sub> " x 2 <sup>3</sup> / <sub>4</sub> " x 2 <sup>1</sup> / <sub>8</sub> "		18 <sup>7</sup> / <sub>8</sub> " x 2 <sup>3</sup> / <sub>4</sub> " x 2 <sup>1</sup> / <sub>8</sub> "	11 <sup>13</sup> / <sub>16</sub> " x 2 <sup>13</sup> / <sub>16</sub> " x 4 <sup>1</sup> / <sub>8</sub> "	
Weight	3.5 lbs.		3.5 lbs.	2.4 lbs.	
[Subwoofer] Dimensions (W x H x D)	7 <sup>7</sup> / <sub>8</sub> " x 15 <sup>9</sup> / <sub>16</sub> " x 16 <sup>3</sup> / <sub>8</sub> ";		7 <sup>7</sup> / <sub>8</sub> " x 15 <sup>9</sup> / <sub>16</sub> " x 16 <sup>3</sup> / <sub>8</sub> "	7 <sup>7</sup> / <sub>8</sub> " x 15 <sup>9</sup> / <sub>16</sub> " x 12 <sup>3</sup> / <sub>16</sub> "	
Weight	23.6 lbs.		23.6 lbs.	18.5 lbs.	

DVD Players / DVD Recorder	DVD-S2300MK2	DVD-S1500	DVD-C940	DVD-C740	DVD-S540	DRX-2
Video D/A Converter	54 MHz/12-bit	108 MHz/12-bit	108 MHz/10-bit	54 MHz/10-bit	54 MHz/12-bit	10-bit
Audio D/A Converter	192 kHz/24-bit	192 kHz/24-bit	96 kHz/24-bit	96 kHz/24-bit	96 kHz/24-bit	24-bit
Signal-to-Noise Ratio (CD)	115 dB	115 dB	115 dB	105 dB	105 dB	
Frequency Response (CD/VCD)	2 Hz-20 kHz	2 Hz-20 kHz	2 Hz-20 kHz	2 Hz-20 kHz	2 Hz-20 kHz	4 Hz-20 kHz
(DVD 96 kHz sampling)	2 Hz-44 kHz	2 Hz-44 kHz	2 Hz-44 kHz	2 Hz-44 kHz	2 Hz-44 kHz	4 Hz-44 kHz
Dynamic Range (DVD 48 kHz, 24 Bit)	108 dB (SA-CD)	107 dB (SA-CD)	100 dB	100 dB	100 dB	
Harmonic Distortion + Noise (1 kHz)	0.0016% (SA-CD)	0.0017% (SA-CD)	0.0025%	0.003%	0.003%	
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 4 <sup>9</sup> / <sub>16</sub> " x 13 <sup>3</sup> / <sub>4</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>9</sup> / <sub>16</sub> " x 12 <sup>9</sup> / <sub>16</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 4 <sup>9</sup> / <sub>16</sub> " x 16 <sup>3</sup> / <sub>4</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 2 <sup>15</sup> / <sub>16</sub> " x 11 <sup>7</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 3 <sup>3</sup> / <sub>4</sub> " x 13 <sup>11</sup> / <sub>16</sub> "	
Weight	19.8 lbs.	7.1 lbs.	13.2 lbs.	13.2 lbs.	6.2 lbs.	8.8 lbs.

# HX Series

## Home Theater Reference Speaker Systems

We developed the HX Series as a home theater reference speaker system worthy of the Yamaha name. With a Waveguide horn for superior spatial expression, light and stiff white spruce diaphragms (WSD), 3-way mitered cabinets and more, these are the ultimate choice for top quality home theater enjoyment.



**NS-8HX**  
3-Way Dual  
Woofer Bass-  
Reflex  
Speaker System



**NS-6HX**  
3-Way Bass-Reflex  
Speaker System



**NS-4HX**  
2-Way Dual  
Woofer Bass-  
Reflex Speaker System



**NS-2HX**  
2-Way Bass-Reflex  
Speaker System



**NS-C7HX**  
2-Way Dual Woofer  
Acoustic Suspension  
Center Speaker System



**NS-C5HX**  
2-Way Dual Woofer  
Acoustic Suspension  
Center Speaker System

# EF Series

## Home Theater Speaker Systems

High performance speakers designed for home theater systems. The EF (Elliptical Form) Series feature Waveguide horns, PMD (Polymer-injected Mica Diaphragm) woofers and highest quality internal Monster Cable wiring for total enjoyment of digital movie sound and music sources, plus elegant Yamaha traditional piano finish cabinets.



**NS-777**  
3-Way, 4-Speaker  
Bass-Reflex  
Speaker System



**NS-555**  
3-Way, 4-Speaker  
Bass-Reflex  
Speaker System



**NS-333**  
2-Way Bass-Reflex  
Speaker System



**NS-C444**  
2-Way Acoustic Suspension  
Center Channel Speaker  
Systems

HX Series Speakers	NS-8HX	NS-6HX	NS-4HX	NS-2HX	NS-C7HX	NS-C5HX
Woofers	Dual 8" WSD cone	8" WSD cone	Dual 5" WSD cone	5" WSD cone	Dual 6 <sup>1</sup> / <sub>4</sub> " WSD cone	Dual 5" WSD cone
Midrange Driver	5" WSD cone with Waveguide horn	5" WSD cone with Waveguide horn				
Tweeter	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn	1 <sup>1</sup> / <sub>8</sub> " aluminum dome with Waveguide horn
Magnetic Shielding	Yes	Yes	Yes	Yes	Yes	Yes
Input Power (Max/Nominal)	400 W/140 W	300 W/100 W	300 W/100 W	200 W/60 W	300 W/100 W	300 W/100 W
Sensitivity	92 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m	90 dB/2.83 V/m	91 dB/2.83 V/m	91 dB/2.83 V/m
Frequency Response	35 Hz-50 kHz	45 Hz-50 kHz	55 Hz-50 kHz	60 Hz-50 kHz	45 Hz-50 kHz	55 Hz-50 kHz
Impedance	6 ohms	6 ohms	6 ohms	6 ohms	6 ohms	6 ohms
Dimensions (W x H x D)	14 <sup>5</sup> / <sub>16</sub> " x 43 <sup>3</sup> / <sub>8</sub> " x 15 <sup>5</sup> / <sub>8</sub> "	41 <sup>13</sup> / <sub>16</sub> " x 15 <sup>5</sup> / <sub>8</sub> "	19 <sup>11</sup> / <sub>16</sub> " x 10 <sup>1</sup> / <sub>8</sub> "	7 <sup>5</sup> / <sub>16</sub> " x 12 <sup>1</sup> / <sub>2</sub> " x 7 <sup>7</sup> / <sub>16</sub> "	21 <sup>5</sup> / <sub>8</sub> " x 8 <sup>9</sup> / <sub>16</sub> " x 12 <sup>1</sup> / <sub>2</sub> "	19 <sup>11</sup> / <sub>16</sub> " x 7 <sup>5</sup> / <sub>16</sub> " x 10 <sup>1</sup> / <sub>8</sub> "
Weight	71.6 lbs./unit	61.7 lbs./unit	25.3 lbs./unit	13.2 lbs./unit	33.1 lbs.	25.3 lbs.

EF Series Speakers	NS-777	NS-555	NS-333	NS-C444
Woofers	Dual 8" PMD cone	Dual 6 <sup>1</sup> / <sub>2</sub> " PMD cone	5" PMD cone	Dual 5" PMD cone
Midrange Driver	5" cone with Waveguide horn	5" cone with Waveguide horn		
Tweeter	1" aluminum dome with Waveguide horn	1" aluminum dome with Waveguide horn	1" aluminum dome with Waveguide horn	1" aluminum dome with Waveguide horn
Magnetic Shielding	Yes	Yes	Yes	Yes
Bi-Wiring Connectivity	Yes	Yes		
Input Power (Max/Nominal)	250 W/100 W	250 W/100 W	150 W/60 W	250 W/100 W
Frequency Response	30 Hz-35 kHz	35 Hz-35 kHz	65 Hz-35 kHz	55 Hz-35 kHz
Sensitivity	89 dB/2.83 V/m	88 dB/2.83 V/m	87 dB/2.83 V/m	89 dB/2.83 V/m
Impedance	6 ohms	6 ohms	6 ohms	6 ohms
Dimensions (W x H x D)	10 <sup>7</sup> / <sub>16</sub> " x 43 <sup>5</sup> / <sub>16</sub> " x 15 <sup>3</sup> / <sub>8</sub> "	8 <sup>3</sup> / <sub>4</sub> " x 38 <sup>9</sup> / <sub>16</sub> " x 13 <sup>9</sup> / <sub>16</sub> "	7 <sup>7</sup> / <sub>8</sub> " x 12 <sup>5</sup> / <sub>8</sub> " x 8 <sup>3</sup> / <sub>8</sub> "	20 <sup>1</sup> / <sub>4</sub> " x 7 <sup>1</sup> / <sub>2</sub> " x 8 <sup>3</sup> / <sub>8</sub> "
Weight	53.7 lbs./unit	44.1 lbs./unit	12.1 lbs./unit	16.1 lbs.

# Subwoofers

A Must for Home Theater

Yamaha subwoofers use sophisticated technologies such as QD-Bass (Quatre Dispersion Bass, down-firing drivers that radiate the sound in four directions) and Advanced YST (Yamaha Active Servo Technology) to ensure the highest levels of sound pressure and overall performance.



**YST-SW1500**

Advanced YST and  
QD-Bass Subwoofer



**YST-SW315**

Advanced YST and  
QD-Bass Subwoofer



# Other Speakers

Home Theater Speaker Systems

To meet varied system requirements, Yamaha has developed a variety of speakers from tower types to slim, compact designs. They are available singly and in convenient packages. Your Yamaha dealer can recommend the ideal speakers to bring out the full potential of your home theater system.



**NS-6490**

3-Way Acoustic  
Suspension Speaker  
System (Black finish)  
(White finish available.)

Model number:  
NS-6490

**NS-AW350**

All Weather Speaker  
System (Black finish)  
(White finish available.)

Model number:  
NS-AW350W

**NS-AW150**

All Weather Speaker  
System (Black finish)  
(White finish available.)

Model number:  
NS-AW150W

**SPS-10MM (Silver)**

Optional Speaker  
Stands for NS-P436

- 12" x 12" (base),  
24<sup>3</sup>/<sub>8</sub>"-34<sup>1</sup>/<sub>8</sub>" (height)
- 3.5 lbs.



**YST-SW215**

Advanced YST and  
QD-Bass Subwoofer



**YST-SW015**

Advanced YST and  
QD-Bass Subwoofer



**NS-FP9500**

Home Theater 6.1-Channel  
Speaker Package (Front  
Speaker Stands Included)



**NS-P436**

Home Theater 6.1-Channel  
Speaker Package  
(High Gloss Piano Finish)



**NS-P236**

Home Theater 6.1-Channel  
Speaker Package



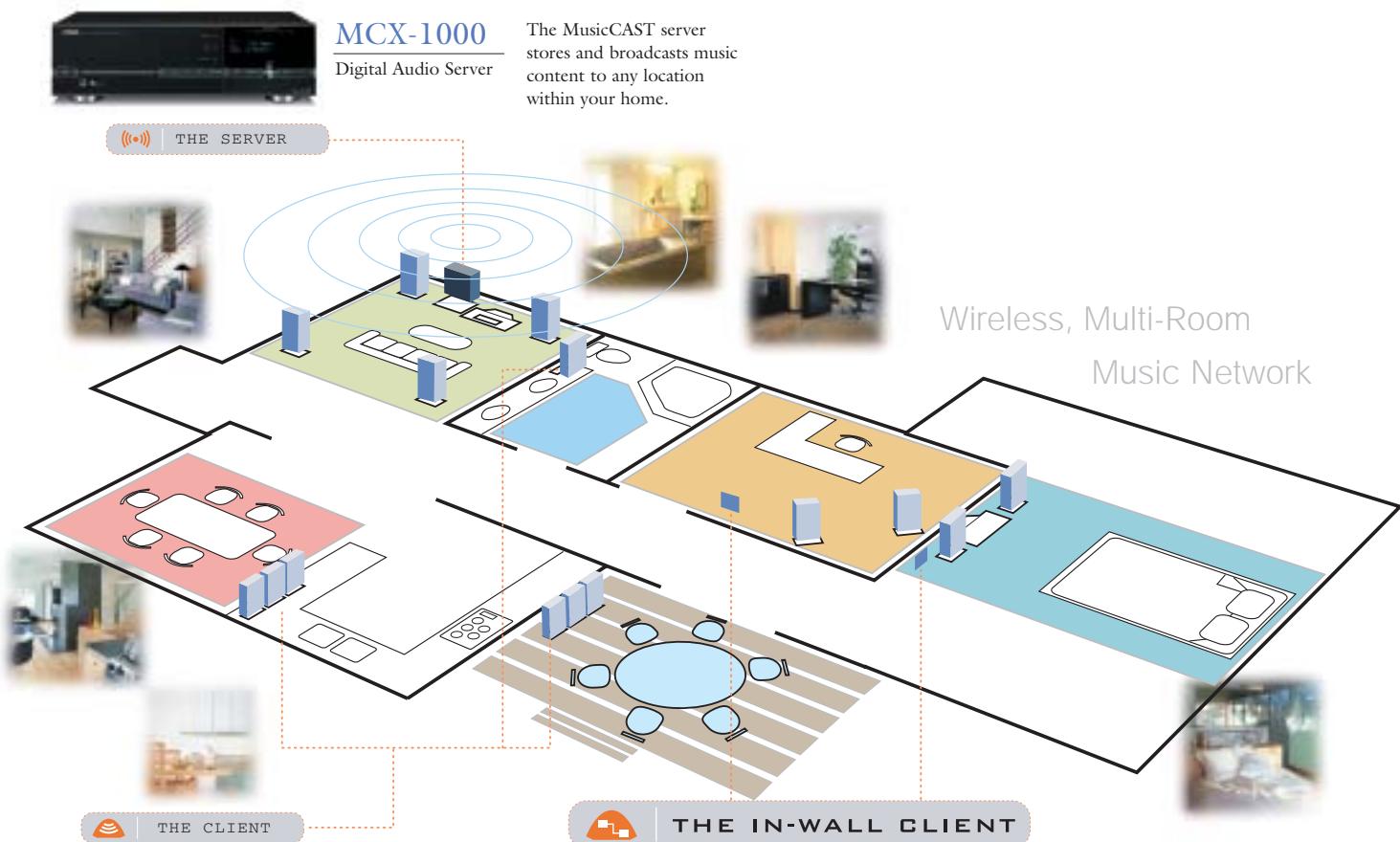
Subwoofers	YST-SW1500	YST-SW315	YST-SW215	YST-SW015		
Advanced YST	Yes	Yes	Yes	Yes		
QD-Bass Technology	Yes	Yes	Yes	Yes		
High-Efficiency Power Amplifier	Yes	Yes				
High-Efficiency Power Supply	Yes					
Multi-Range Drivers	12" extra-long stroke cone	10" cone	8" cone	6 <sup>1</sup> / <sub>2</sub> " cone		
Magnetic Shielding	Yes	Yes	Yes	Yes		
High Cut Filter (Continuously Variable)	40-140 Hz	40-140 Hz	40-140 Hz	50-150 Hz		
Phase Control (Normal or Reverse)	Yes	Yes	Yes	Yes		
Auto Standby	Yes	Yes	Yes	Yes		
BASS (Bass Action Selector System)	Yes	Yes	Yes	Yes		
Dynamic Power	1,000 W	270 W	150 W	120 W		
Frequency Response	16-160 Hz (-10 dB)	20-160 Hz (-10 dB)	28-170 Hz (-10 dB)	30-200 Hz (-10 dB)		
Dimensions (W x H x D)	16 <sup>9</sup> / <sub>16</sub> " x 20 <sup>1</sup> / <sub>8</sub> " x 17 <sup>5</sup> / <sub>8</sub> "	13 <sup>3</sup> / <sub>4</sub> " x 16 <sup>15</sup> / <sub>16</sub> " x 15 <sup>1</sup> / <sub>16</sub> "	11 <sup>7</sup> / <sub>16</sub> " x 14 <sup>3</sup> / <sub>16</sub> " x 12 <sup>11</sup> / <sub>16</sub> "	11" x 12 <sup>13</sup> / <sub>16</sub> " x 12 <sup>5</sup> / <sub>8</sub> "		
Weight	63.9 lbs.	41.9 lbs.	25.3 lbs.	20.3 lbs.		

	NS-6490	NS-AW350/W	NS-AW150/W	6.1-Channel Packages	NS-FP9500	NS-P436	NS-P236
Woofers	8" long-throw cone	6.5" high compliance	5" high compliance	System Frequency Response	28 Hz-40 kHz	30 Hz-60 kHz	30 Hz-25 kHz
Midrange Driver	4" cone			Magnetic Shielding	All speakers	All speakers	All speakers
Tweeter	7/8" balanced-dome	1" PEI dome	1/2" PEI dome	5 Satellites/Center	3-way acoustic suspension	2-way acoustic suspension	Full-range acoustic suspension
Magnetic Shielding	Yes			Drivers (Satellites)	Quad 4" Woofer & 1" Tweeter	1 coaxial & 1 full-range drivers	Dual 2" full-range drivers
Input Power (Max/Nominal)	140 W/70 W	130 W/40 W	120 W/35 W	Drivers (Center)	Quad 4" Woofer & 1" Tweeter	1 coaxial & 1 full-range drivers	Dual 2" full-range drivers
Sensitivity	90 dB/2.83 V/m	87 dB/2.83 V/m	85 dB/2.83 V/m	Input Power (Max/Nominal)	120 W/35 W	300 W/100 W	300 W/100 W
Frequency Response	45 Hz-23 kHz	55 Hz-40 kHz	80 Hz-40 kHz	Sensitivity	83 dB/2.83 V/m	85 dB/2.83 V/m	86 dB/2.83 V/m
Impedance	6 ohms	6 ohms	6 ohms	Impedance	6 ohms	6 ohms	6 ohms
Dimensions (W x H x D)	10 <sup>1</sup> / <sub>2</sub> " x 16 <sup>13</sup> / <sub>16</sub> " x 13 <sup>1</sup> / <sub>4</sub> "	7 <sup>1</sup> / <sub>8</sub> " x 13 <sup>1</sup> / <sub>2</sub> " x 8 <sup>3</sup> / <sub>16</sub> "	5 <sup>3</sup> / <sub>16</sub> " x 10" x 6"	Subwoofer	Advanced YST/QD-Bass	Advanced YST/QD-Bass	Advanced YST
Weight	13.2 lbs./unit	6.4 lbs./unit	3.7 lbs./unit	Output Power	130 W	120 W	100 W



Interactive Wireless Home Music Network System

Now the power of the MusicCAST music distribution system is packed into a stylish in-wall mountable client. Designed to offer greater flexibility and convenience, the new distributed audio controllers take family music enjoyment to a whole new level.



### MCX-A10

Wireless Digital Audio Terminal

Clients are used to retrieve music content stored on the MusicCAST server, for instant access to music in any location within your home.



### MCX-SP10

Optional Speaker System

Perfectly matched MusicCAST speakers offer high quality sound in a slim, stylish package.



### MCX-C15

Distributed Audio Controller

In-wall mountable, network ready Clients add versatility to the MusicCAST system with great new features such as Favorite Function buttons, IR Flasher support and Yamaha AV Link.



### MCX-CA15

Distributed Audio Amplifier

This multipurpose in-wall amplifier is perfectly matched to the MCX-C15 Client. It provides high quality power to speakers, as well as subwoofer and video OSD outputs.



Stylish compact design, flexible placement, high sound quality.



### TSX-20 Tabletop CD Receiver System

High Sound Quality, 2-Way Bass Reflex Speakers with High-Gloss Finish and Detachable Grilles



### TSX-15 Tabletop CD Receiver System

2-Way Bass Reflex Speakers with High-Gloss Finish and Detachable Grilles can be used in four positions



### TSX-10 Tabletop CD Receiver System

2-Way Bass Reflex Speakers with Detachable Grilles can be used in four positions

- Space-saving, free-layout design means it can be used in any room where there's a bit of free space
- Can be used in four positions: Vertical, 70°, 45° and Horizontal (TSX-20 Speakers: Vertical only)
- Compact and thin shape made possible by the highly efficient digital amplifier
- One-touch open/close acrylic cover (TSX-20/15: smoky gray; TSX-10: ice green)
- CD-R/RW playback compatible CD player
- High power output (18W x 2)
- 40-station AM/FM random access preset tuner
- 12-character dot-matrix FL display with 6-step dimmer
- Versatile timer functions including snooze
- Card-type remote control unit

**Dimensions (W x H x D)/Weight**

- Center units: 16" x 3<sup>1</sup>/<sub>8</sub>" x 8<sup>3</sup>/<sub>8</sub>" / 8.8 lbs.
- TSX-20 speakers: 4<sup>15</sup>/<sub>16</sub>" x 9<sup>1</sup>/<sub>16</sub>" x 5<sup>3</sup>/<sub>4</sub>" / 4.2 lbs.
- TSX-15/TSX-10 speakers: 5<sup>1</sup>/<sub>2</sub>" x 8<sup>3</sup>/<sub>8</sub>" x 3<sup>7</sup>/<sub>8</sub>" / 2.2 lbs.



Natural sound enjoyment from a high performance, elegant system.



### MCR-E500 Micro Component System

#### RX-E400 Receiver

- High power output: 40 W x 2 (RMS) ■ Linear Damping
- High dynamic power and low-impedance drive capability
- Discrete configuration amplifier
- Versatile timer functions
- Subwoofer out
- 40-station preset tuning ■ 8<sup>9</sup>/<sub>16</sub>" x 6<sup>5</sup>/<sub>8</sub>" x 14<sup>5</sup>/<sub>8</sub>" (W x H x D); 11.9 lbs.

#### CDC-E500 CD Changer

- 3-disc PlayXchange ■ CD Text display ■ CD-R/CD-RW playback
- Optical digital out ■ 8<sup>9</sup>/<sub>16</sub>" x 4<sup>1</sup>/<sub>4</sub>" x 13<sup>11</sup>/<sub>16</sub>" (W x H x D); 7.7 lbs.



#### NX-E400

2-Way Bass-Reflex Speaker System

- 110W maximum input power
- High gloss piano finish ■ 6<sup>1</sup>/<sub>2</sub>" x 11<sup>13</sup>/<sub>16</sub>" x 8<sup>3</sup>/<sub>4</sub>" (W x H x D); 9.5 lbs./unit



### MCR-E300 Micro Component System

#### CRX-E300 CD Receiver

#### [RECEIVER SECTION]

- High power output: 25 W x 2 (RMS) ■ Linear Damping
- High dynamic power and low-impedance drive capability
- Discrete configuration amplifier
- Subwoofer out ■ Tone controls
- 40-station preset tuning
- Versatile timer functions

#### [CD PLAYER SECTION]

- CD Text display ■ CD-R/CD-RW playback ■ Copy time control ■ Optical digital out ■ 8<sup>9</sup>/<sub>16</sub>" x 6<sup>5</sup>/<sub>8</sub>" x 12<sup>5</sup>/<sub>16</sub>" (W x H x D); 11 lbs.



#### NX-E300

2-Way Bass-Reflex Speaker System

- 110W maximum input power
- High gloss piano finish ■ 6<sup>1</sup>/<sub>2</sub>" x 10" x 7<sup>3</sup>/<sub>16</sub>" (W x H x D); 7.5 lbs./unit

### PianoCraft Option (Not available in some areas)



### KX-E300 Auto-Reverse Cassette Deck

- Auto reverse ■ Music search ■ 4-digit tape counter ■ 12-segment peak level meter ■ Frequency response (metal tape): 30 Hz-18

kHz ±3 dB ■ Wow & flutter (W RMS): 0.09% ■ 8<sup>9</sup>/<sub>16</sub>" x 3<sup>7</sup>/<sub>16</sub>" x 11<sup>7</sup>/<sub>16</sub>" (W x H x D); 6.6 lbs.

# Created for audio purists, by audio purists.

Anyone familiar with the Yamaha name knows that we have always been dedicated to providing “natural sound” in its truest sense — audio reproduction that sounds as close as possible to the real thing. Given our success with other digital products and having the most advanced digital technology at hand, our engineers decided to focus on creating a truly superb digital amplifier — one that would utilize the benefits of digital technology without its drawbacks to deliver incredibly accurate and pure natural sound. The result is the MX-D1. Prepare to be amazed and delighted.



## MX-D1 Stereo Digital Power Amplifier

### Power Engine Chipset

To overcome the limitations of conventional digital amplifiers, Yamaha developed its own Power Engine chipset, which enables the MX-D1 to achieve high levels of sound quality and power, as well as low power consumption and compact size.



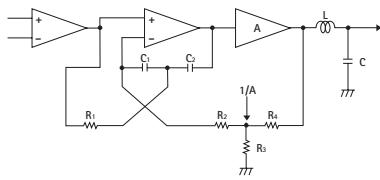
YDA133 Modulator LSI and  
YDA134 Power MOS-FET Drive LSI

### Constant Gain PLL Modulator Circuit

This circuit eliminates the dependency of the output signal on power voltage fluctuation by using the YDA133 modulator LSI, which combines a PLL circuit with a modulator circuit.

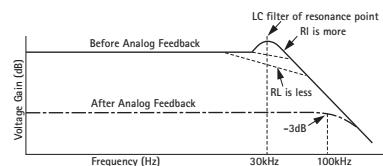
### Cross Feedback Loop Circuit

The digital pulse output is fed back by the Cross Feedback Loop, improving the linearity of the output stage and of the modulator circuit. This achieves superior low distortion characteristics and high dynamic range.



### Advanced Analog Feedback

The 352.8kHz carrier signal is removed by the fc 30kHz output LC filter, and forwarded negative feedback is added to achieve amplification over a wide bandwidth of 100kHz and with a high damping factor (over 200), without load impedance dependency.



### Active Power Control System

This system detects the output current to control the voltage limiter value in order to independently control the continuous maximum output and dynamic power, making it possible to continually provide maximum performance.

### Monaural Independent Construction

Separate chambers provide higher efficiency and ensure that there is no chance of electronic interference degrading performance.

### Other Notable Features

- High-Speed Protection Circuits
- Direct Drive High-Efficiency Power Supply and Magnetic Coupling Rectification Circuit
- Highest Quality Parts and Extensive Vibration Damping



### Custom Installation Compatibility

Using the MX-D1 in a custom installation is facilitated by its RS-232C interface for bi-directional control, ID setting for a multi-channel amplifier system and trigger in/out daisy chain connection for synchronized power switching via Through and Power modes.

### MX-D1 Main Specifications

[AUDIO SECTION] • Min. RMS Output Power (8 ohms, 1 kHz, 0.1% THD): 500 W + 500 W  
• Dynamic Power/Channel (by IHF Dynamic Headroom measuring method): 1,000 W (2 ohms) / 1,000 W (4 ohms) / 850 W (6 ohms) / 700 W (8 ohms)  
• Dynamic Headroom: 3 dB (4 ohms) / 2.3 dB (6 ohms) / 1.5 dB (8 ohms)  
• Damping Factor (1 kHz, 8 ohms): 200 • Input Sensitivity/Impedance (500 W/8 ohms, Unbalanced; Balanced): 1.3 V/25 k-ohms; 2.2 V/10 k-ohms  
• Frequency Response: 1 Hz-100 kHz ±3 dB  
• Total Harmonic Distortion (Unbalanced; Balanced to Sp Out, 1 kHz, 10 W/8 ohms, 20 kHz LPF): 0.002%  
• Signal-to-Noise Ratio (IHF-A-Network, Unbalanced/Balanced, S: 1.3 V, Input Shorted, 20 kHz LPF): 120 dB  
• Residual Noise (IHF-A-Network, Unbalanced/Balanced, 20 kHz LPF): 63 µV  
• Channel Separation (1 kHz, Unbalanced/Balanced, Input 5.1 k-ohms Shorted): 100 dB  
• Muting: -∞

[GENERAL] • Standby Power Consumption: Less than 0.1 W  
• Dimensions (W x H x D): 17-1/8" x 2-15/16" x 17-3/16"  
• Weight: 22.9 lbs.



### YPC-1 Passive Controller (Option)

The YPC-1, a Passive Controller unit, provides input selection and volume control. With a black finish that matches the MX-D1, this unit is available as an option.

- -1dB (-100dB) gang error high quality continuously variable attenuator with brass case
- Low-resistance rotary relector switch • Extra-thick (1/2"), Aluminum-extruded, Yamaha traditional piano finish front panel and side panels
- Point-controlled, anti-resonance feet • 9-7/16" x 2-15/16" x 10-5/16" (W x H x D) • 7.5 lbs.



**RX-777**

AM/FM Stereo Receiver

- ToP-ART • CD Direct
- Amplification with switch • DVD-Audio/SACD ready
- Gold-plated input terminals (all terminals)

**RX-596**

AM/FM Stereo Receiver

- ToP-ART • CD Direct Amplification with switch • DVD-Audio/SACD ready
- Remote controllable motor-driven input selector and volume control

**RX-496**

AM/FM Stereo Receiver

- Pure Direct switch • 5 audio inputs with 2 tape monitor positions • I/O port • 40-station random access preset tuning

**RX-396**

AM/FM Stereo Receiver

- 3 audio inputs with tape monitor position • I/O port for custom installation • 40-station random access preset tuning

**AX-596**

Integrated Amplifier

- ToP-ART • CD/DVD Direct Amplification with Switch • DVD-Audio/SACD ready
- Gold-plated input terminals (all terminals)

**CDC-685**

CD Changer

- Yamaha patented PlayXchange
- CD-R/CD-RW playback compatibility • CD Text display
- I/O port for custom installation

**CDC-585**

CD Changer

- Yamaha patented PlayXchange
- CD-R/CD-RW playback compatibility • CD Text display
- Peak search and tape edit

**KX-W321**

Auto-Reverse Double Cassette Deck

- Two (normal/high) speed dubbing
- Relay play • Dolby B/C NR
- Auto tape type selection

Cassette Deck	KX-W321
Wow & Flutter W RMS	0.08%
W Peak	±0.15%
Frequency Response	
Metal	20 Hz-19 kHz, ±3 dB
Signal-to-Noise Ratio	
Dolby B NR	66 dB
Dolby C NR	74 dB
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 5 <sup>3</sup> / <sub>4</sub> " x 11"
Weight	11 lbs.

**TX-492**

AM/FM Stereo Tuner

- 40-station random access preset tuning • Auto preset tuning
- Absolute Linear Phase IF Amplifier circuitry

Tuner	TX-492
THD	0.3% (1 kHz)
Frequency Response	30 Hz-13 kHz ±0.5 dB
Signal-to-Noise Ratio	
Mono	82 dB
Stereo	76 dB
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 3 <sup>3</sup> / <sub>8</sub> " x 15 <sup>5</sup> / <sub>8</sub> "
Weight	7.1 lbs.

Receivers/Amplifier	RX-777	RX-596	RX-496	RX-396	AX-596
ToP-ART	Yes	Yes			Yes
Pure Direct Switch	Yes	Yes	Yes		Yes
CD Direct Amplification with Switch	Discrete configuration	Yes			Discrete configuration
Min. RMS Output Power/Channel (8 ohms, 20 Hz-20 kHz) [THD]	100 W [0.019%]	80 W [0.025%]	75 W [0.04%]	50 W [0.04%]	100 W [0.015%]
High Dynamic Power, Low Impedance Drive Capability Dynamic Power/Ch (8/4/2 ohms)	Yes 140/220/290 W	Yes 120/180/200W	Yes 105/150/178 W	Yes 70/89/100 W	Yes 140/220/290 W
Linear Damping Damping Factor (8 ohms, 20 Hz-20 kHz)	Yes 240 (speaker A)	Yes 240	Yes 100	Yes 100	Yes 320 (speaker A)
Continuously Variable Loudness Control	Yes	Yes	Yes	Yes	Yes
Rec Out Selector	Yes	Yes			Yes
Remote Controllable Master Volume Control	Motor-driven	Motor-driven	Motor-driven	Motor-driven	Motor-driven
40-Station Preset Tuning	Yes	Yes	Yes	Yes	
THD (CD, 20 Hz-20 kHz)	0.012% (50 W/8 ohms)	0.01% (40 W/8 ohms)	0.02% (35 W/8 ohms)	0.02% (35 W/8 ohms)	0.008% (50 W/8 ohms)
Frequency Response	20 Hz-100 kHz ±1 dB	20 Hz-20 kHz ±0.5 dB	20 Hz-20 kHz ±0.5 dB	20 Hz-20 kHz ±0.5 dB	20 Hz-100 kHz +0.5/-3 dB
Signal-to-Noise Ratio (CD)	110 dB	110 dB	108 dB	108 dB	110 dB
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 6" <sub>1</sub> / <sub>16</sub> " x 15 <sup>5</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6" <sub>1</sub> / <sub>16</sub> " x 15 <sup>5</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 5 <sup>3</sup> / <sub>4</sub> " x 12 <sup>3</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 5 <sup>3</sup> / <sub>4</sub> " x 12 <sup>3</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 6" <sub>1</sub> / <sub>16</sub> " x 15 <sup>5</sup> / <sub>8</sub> "
Weight	21.6 lbs	20.9 lbs.	18.1 lbs	14.1 lbs.	23.4 lbs.

CD Changers/CD Player	CDC-685	CDC-585
Yamaha Patented PlayXchange	5-disc	5-disc
CD-R/CD-RW Playback	Playback	Playback
CD Text Display	Yes	Yes
Synchro Rec	Yes	Yes
Peak Search	Yes	Yes
Programmable Play	40-track	40-track
Optical Digital Output	Yes	Yes
I/O Port for Custom Installation	Yes	
Harmonic Distortion + Noise	0.003%	0.003%
Frequency Response	2 Hz-20 kHz ±0.5 dB	2 Hz-20 kHz ±0.5 dB
Signal-to-Noise Ratio	106 dB	106 dB
Dynamic Range	96 dB	96 dB
Dimensions (W x H x D)	17 <sup>1</sup> / <sub>8</sub> " x 4 <sup>9</sup> / <sub>16</sub> " x 15 <sup>7</sup> / <sub>8</sub> "	17 <sup>1</sup> / <sub>8</sub> " x 4 <sup>9</sup> / <sub>16</sub> " x 15 <sup>7</sup> / <sub>8</sub> "
Weight	12.7 lbs.	12.7 lbs.

**d-cinema**

d-cinema™ is the slogan of Yamaha A/V products and technology, reflecting our focus on digital technology and our leadership in creating and refining digital home theater.

**CINEMA DSP DIGITAL**

Yamaha's unique technology for the creation of sound fields is capable of powerfully reproducing the three-dimensional environment that movie sound engineers aim to convey, in any audio format from monaural to the latest 6.1-channel digital surround. It is compatible with DVD and all other A/V sources. Yamaha CINEMA DSP technology has received a patent in the U.S. (Patent No. 5,261,005).

**SILENT CINEMA**

"SILENT" is a trademark of Yamaha Corporation

**PLAY XCHANGE**

PlayXchange is a registered trademark in the U.S. Yamaha has received a patent for PlayXchange technology in the U.S. (Patent No. 5,115,419).

## MAIN AWARDS (Jan. 2003–Jan. 2004)

Product	Area	Publication	Issue	Award/Recommendation
<b>Video Projectors / Plasma Display Monitors</b>				
DPX-1000	Europe	EISA	'03/'04	European high-End AV Product 2003–2004
DPX-1000	UK	WHAT HI-FI Sound and Vision	Award '03	Best Buy
DPX-1000	Germany	Heimkino	Aug. '03	Very Good: Excellence in Playback in Color
DPX-1000	Greece	Sound Magazine	Aug. '03	Top Performance
DPX-1000	Greece	Hitech Magazine	Aug. '03	Top Performance
DPX-1000	France	Son Video	Jul./Aug. '03	★★★★★
DPX-1000	France	Pristage A&V	May '03	★★★★★
DPX-1000	France	Cinema Chez Soi	May '03	The New DLP Star
DPX-1000	Brazil	Isto E	May. '03	Best and Most Expensive Electronics
LPX-500	U.S.	Widescreen Review	Mar. '03	One of the Finest LCD Projector
LPX-500	U.S.	E-Gear	Jan. '04	Editors' Choice Top 40 Award
LPX-500	Germany	Audio	2003	Golden Ear 2003 - Videoprojektor Platz 2
PDM-1	UK	What Video	Apr. '03	Best Buy ★★★★★
<b>A/V Receivers / Amplifiers</b>				
DSP-Z9	UK	WHAT HI-FI	Award '04	★★★★★
RX-Z1	Australia	Audio & Video Lifestyle	Jun. '03	Best Buy Award in Home Theatre Amp/Receiver Category
DSP-AZ1*	Portugal	Audio	Feb. '03	One of the Best Offers of the Market.
DSP-AZ1*	India	av max	Nov. '03	Best Buy ★★★★★
RX-V1400RDS	Germany	Area DVD	Jan. '04	6 Stars Ueberragend
RX-V1400RDS	France	Son Video	Dec. '03	★★★★★
RX-V1400	India	av max	Nov. '03	Best Buy ★★★★★
RX-V740RDS	Norway	DVD & Hjemmekino	'03	Best i Test
DSP-AX640SE	UK	WHAT HI-FI Sound and Vision	Award '03	Best Buy 2003
RX-V640RDS	UK	WHAT HI-FI	Aug. '03	★★★★★
RX-V640RDS	Germany	Video	Jun. '03	Elastic Clear Sound. High Operational Performance
RX-V640RDS	Germany	Area DVD	Apr.'03	A Superstar
RX-V640RDS	France	Son Video	May/Jun.'03	★★★★★
RX-V640RDS	Portugal	Audio	Jul./Aug. '03	It's a unit that shows, again, the qualities of the Japanese brand in this field.
RX-V640RDS	Greece	Sound Magazine	May. '03	Best Buy
RX-V640	India	av max	Nov. '03	Best Buy ★★★★★
RX-V440	Europe	EISA	'03/'04	European Home Theater Receiver 2003–2004
RX-V440RDS	Germany	HiFi Test	Jul./Aug. '03	Test Winner
RX-V440RDS	Sweden	HemmaBio	'03	Test Winner!
RX-V440RDS	Norway	Lyd&Bilde	'03	Test Winner!
RX-V440RDS	UK	WHAT HI-FI	Jul. '03	★★★★★
RX-V440	Indonesia	Audio Video	Dec. '03	Product of the Year 2003 in AV Receiver Category
<b>DVD Players</b>				
DVD-S2300	U.S.	E-Gear	Jan. '04	Editors' Choice Top 40 Award
DVD-S2300	U.S.	Perfect Vision	Dec. '03	DVD Player of the Year
DVD-S2300	UK	HiFi News	Apr. '03	Champion of SA-CD
DVD-S2300	France	Son Video	Apr./Mar. '03	★★★★★
DVD-S830	UK	DVD Buyer	Dec. '03	★★★★★
DVD-S540	Germany	Video	Oct. '03	Outstanding Test Winner
<b>Subwoofers</b>				
YST-SW1500	Germany	Audio	'03	Golden Ear 2003: Subwoofer Aktiv Platz 3
YST-SW1500	Norway	Lyd&Bilde	Nov. '03	"In for the Kill!"
YST-SW315/YST-SW215	Germany	Video	Aug. '03	Recommended Model: Deep Bass
YST-SW315	Sweden	HiFi & Musik	'03	"The Surprise!": Excellent Buy!
YST-SW305	Australia	Sound & Image	'03	Active Subwoofer upto \$999
<b>Systems</b>				
DVX-S120	Japan	HiVi	Dec. '03	No.1 in Home Theater Subcategory Surround System
DVX-S120	Norway	Lyd&Bilde	Dec. '03	Test Winner: "Crystal Clear"
DVX-S100	Australia	Sound & Image	'03	Winner: Home Theatre in a Box under \$2000
RX-V340+NS-P100	Indonesia	Audio Video	Jan. '04	Best Buy
MusicCAST	U.S.	Electronic House	'03	Product of the Year
MusicCAST	U.S.	Home Automation	Jul. '03	Top 50 Editor's Picks for 2003
MusicCAST	U.S.	Sound & Vision	Dec. '03	Winner: Sound & Vision Reviewer's Choice Award
MusicCAST	UK	WHAT HI-FI Sound & Vision	Nov. '03	★★★★★
MusicCAST	Germany	Audio	Oct. '03	★★★★★

\* The DSP-AZ1 provides the same performance and features as the RX-Z1 except for tuner functions.

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 **YAMAHA**

CREATING 'KANDO' TOGETHER

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